

THE CONTRACT JOURNAL

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THE BRITISH CONSTRUCTIONAL ENGINEER AND THE CONTRACTOR

No. 4,205 81st YEAR

THURSDAY, JANUARY 28, 1960

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Dumper conditions call for the finest construction. Not just sheer weight, of course, but strength at the points which only long experience reveals to the designer. Now in its eleventh year of continuous production, the Muir-Hill 14 B 4½ cu. yd. Dumper has proved itself more than equal to the worst conditions that exist.

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THERE'S

Winget

Ready

Pre-mixed

PLANT

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MIXING

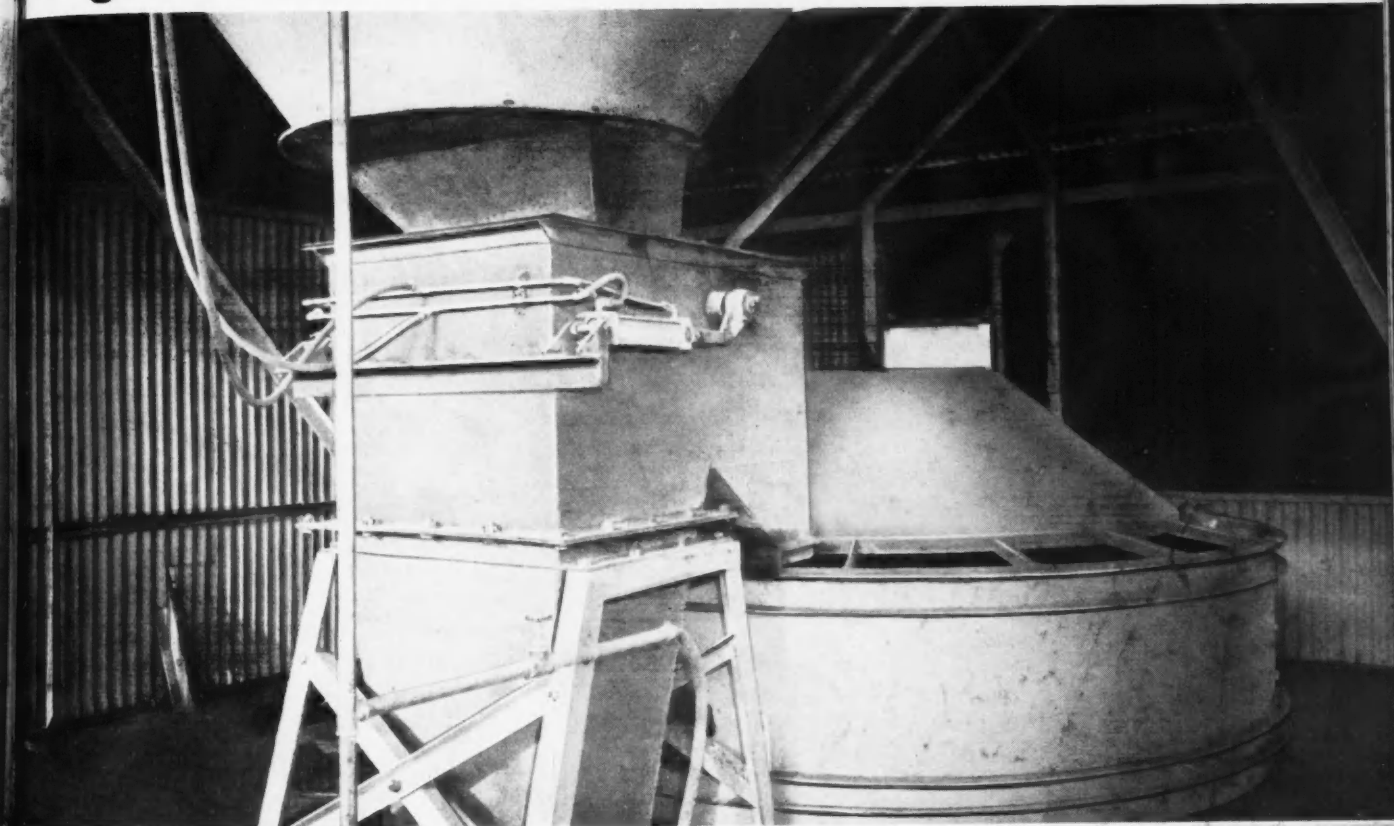
The mixer (right) is a Winget high-speed Turbo-mixer of 2 cu. yds. capacity. Winget Turbomixers are being used extensively in this type of plant because of their high speed, the high quality of the mix and the small amount of space needed for accommodation.

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The Dry Batch plant shown on the right is owned by Messrs. Brett Ltd. of Canterbury.

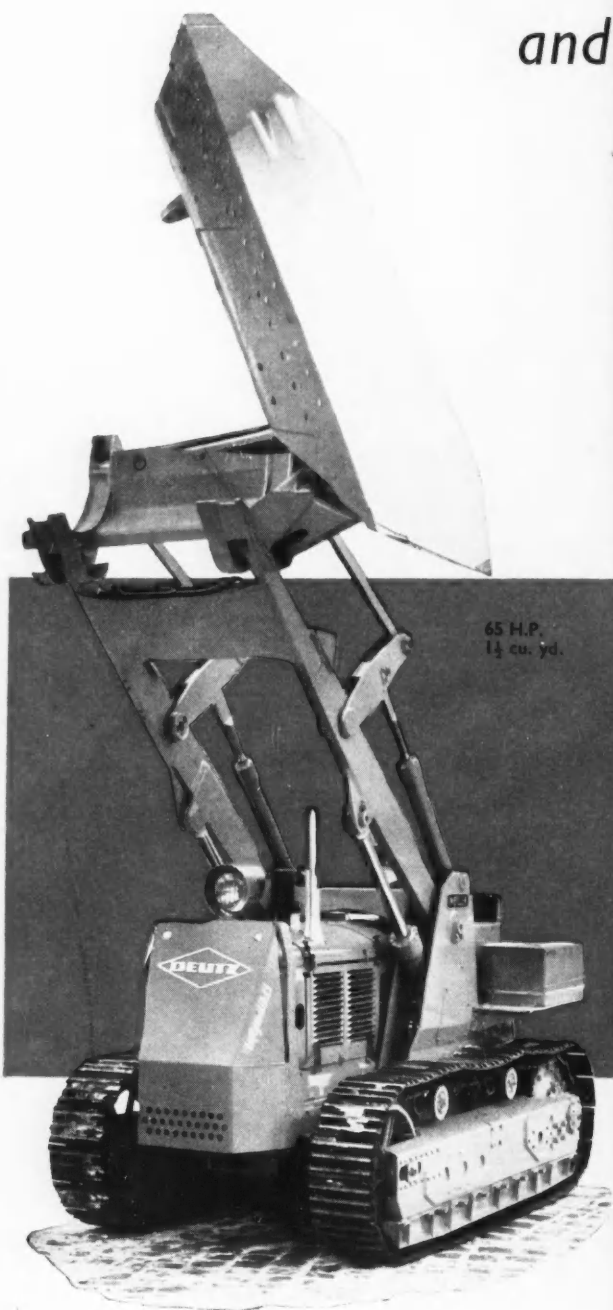
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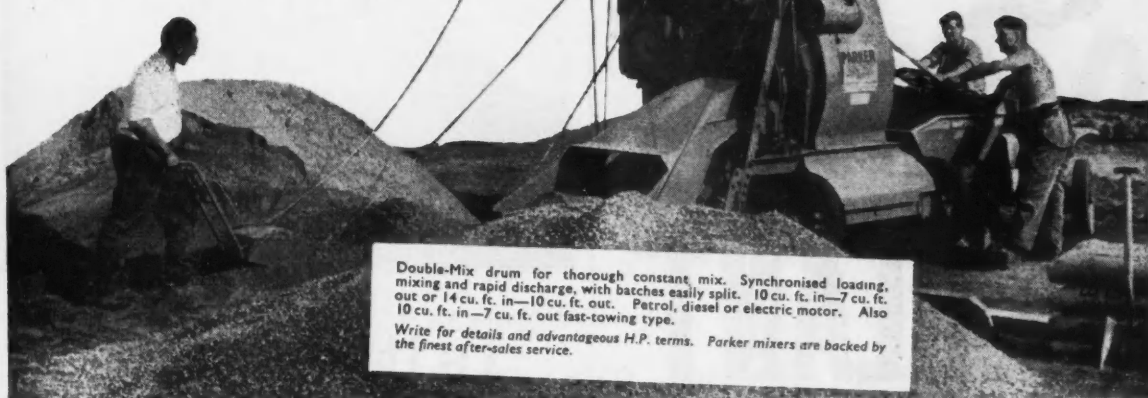
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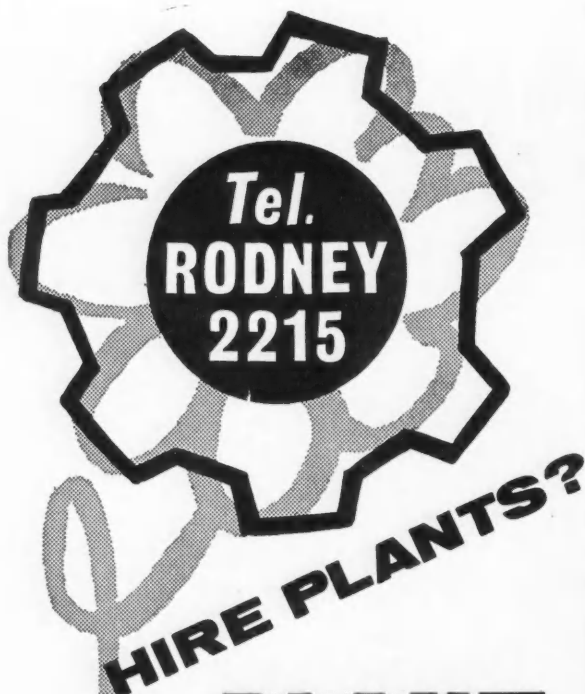
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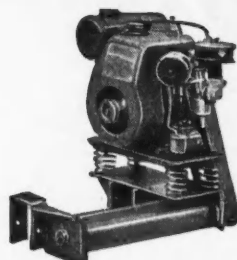
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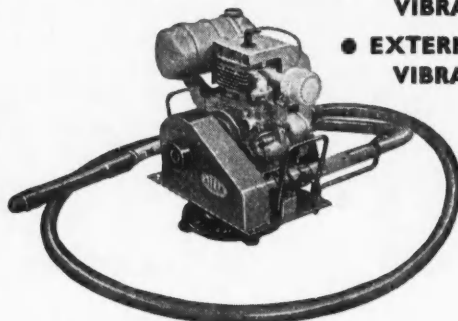
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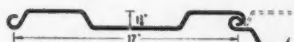


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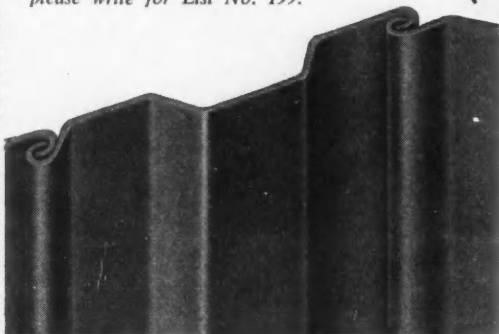
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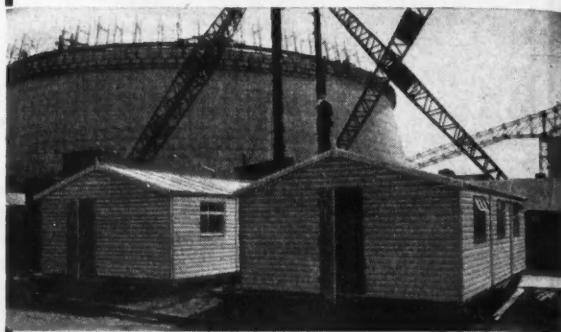
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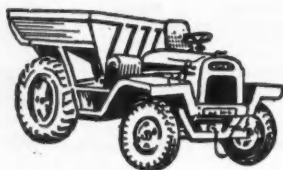
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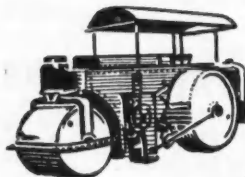


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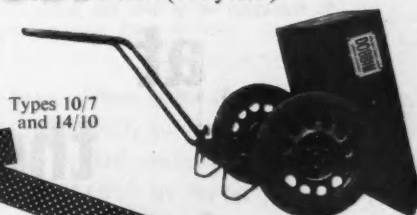
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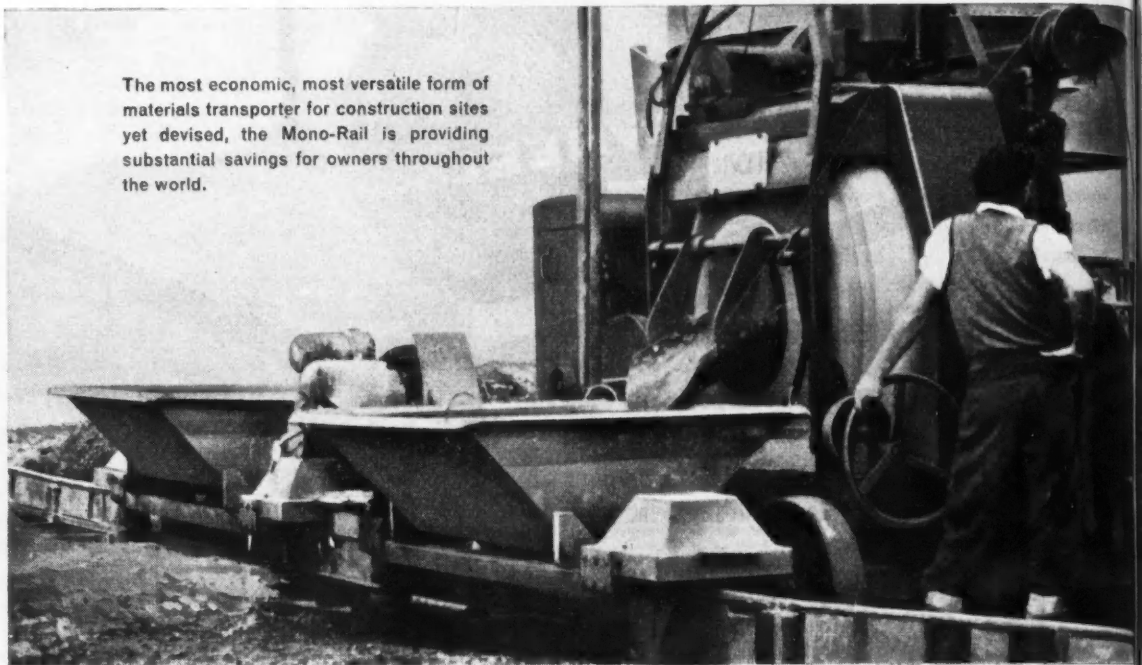
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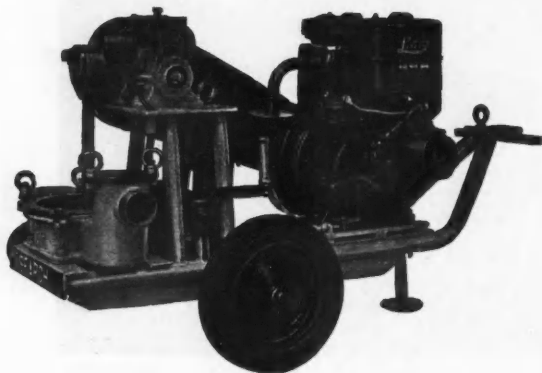
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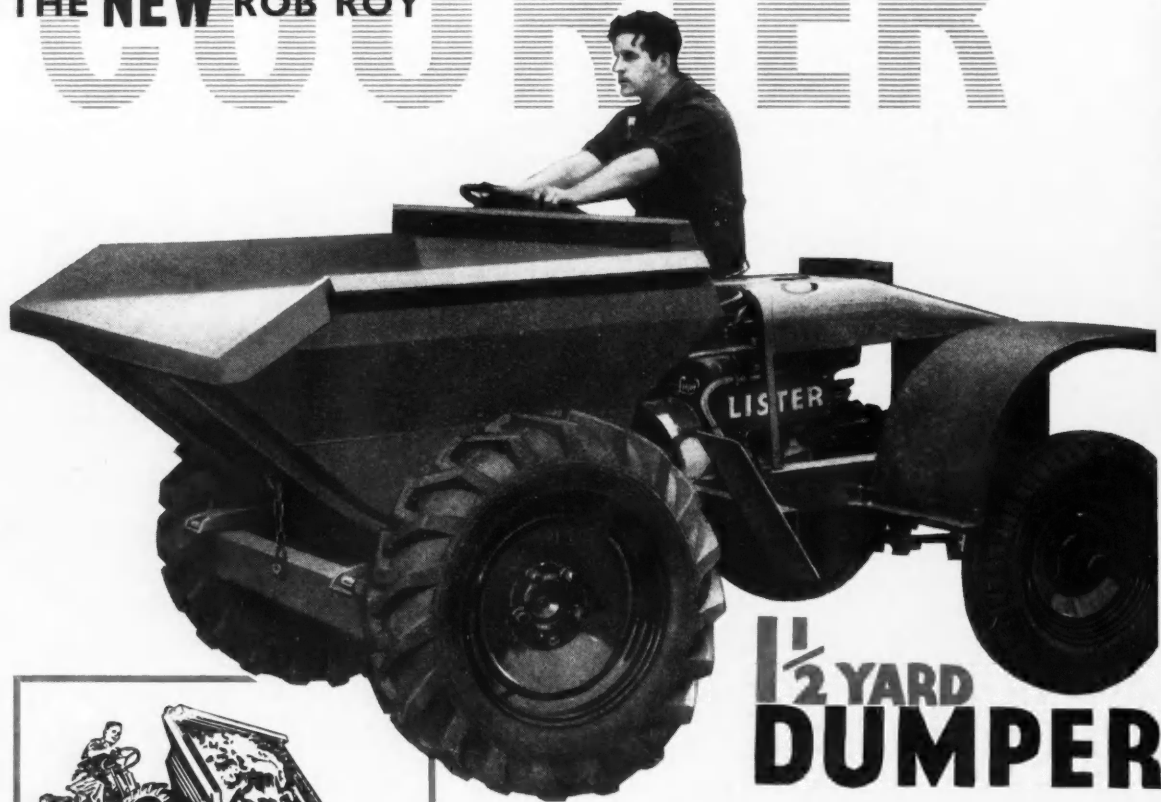
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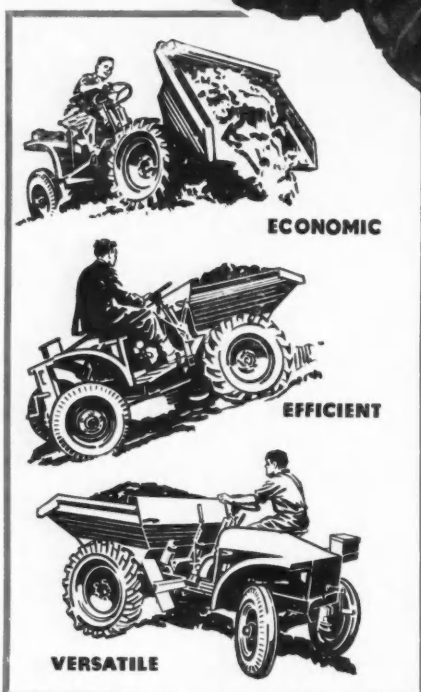
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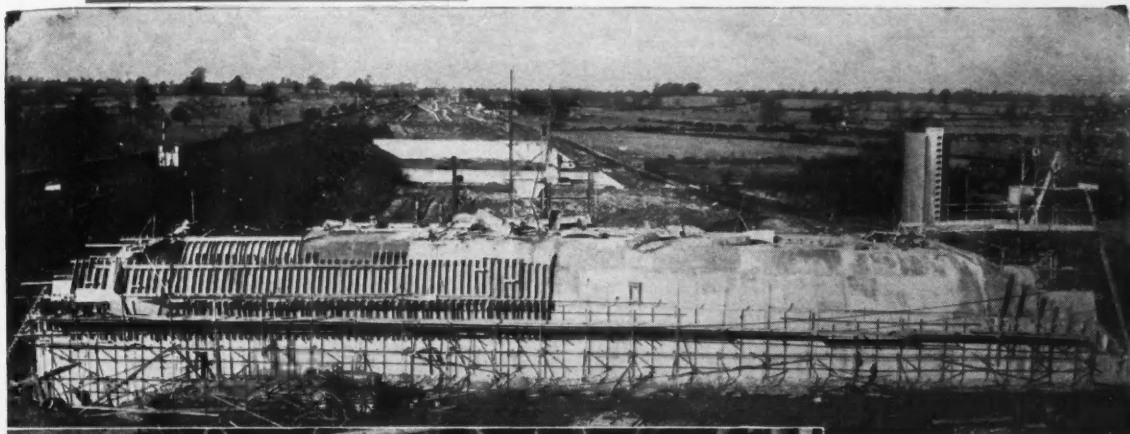
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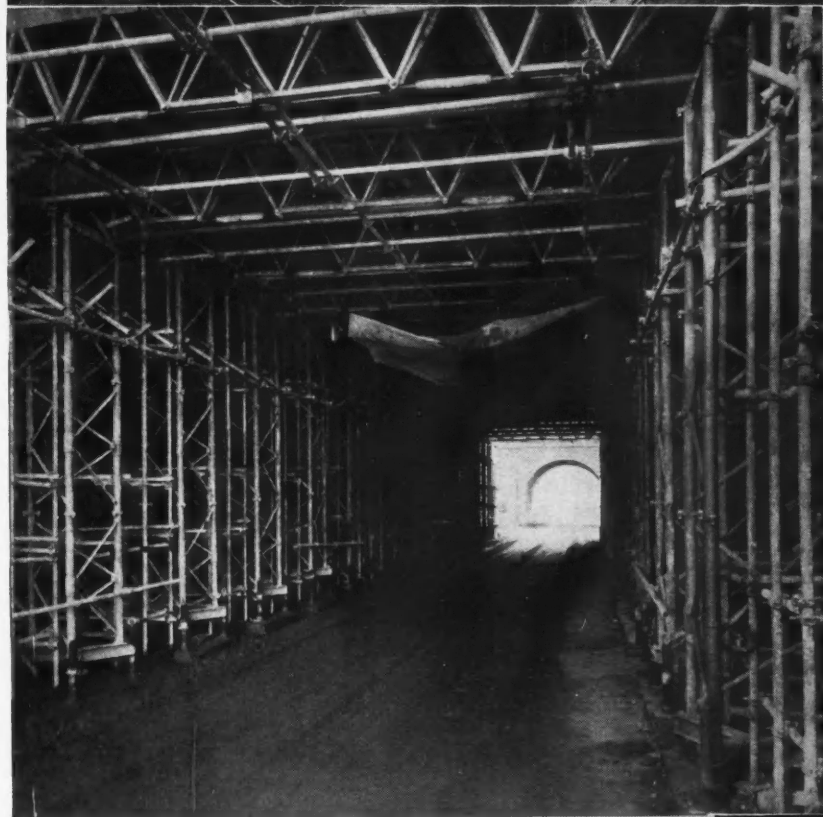
KEEPS THE TRAFFIC MOVING



*General view of the Single-Span Major Underbridge over the Daventry-Long Buckby Road on the new London-Yorkshire Motorway.
Contractor: Messrs. John Laing and Son Limited.*

These photographs illustrate the advantages of using DSL 500 Girders and Trishore Trestles where provision must be made for through Traffic on Bridge Construction. Supplied in unit lengths in varying dimensions. Girders and Trestles are quickly bolted together and erected in position eliminating the need for costly scaffolding erections. For spans of 90 ft. or greater and loads up to 25 tons — we will gladly supply further information on request.

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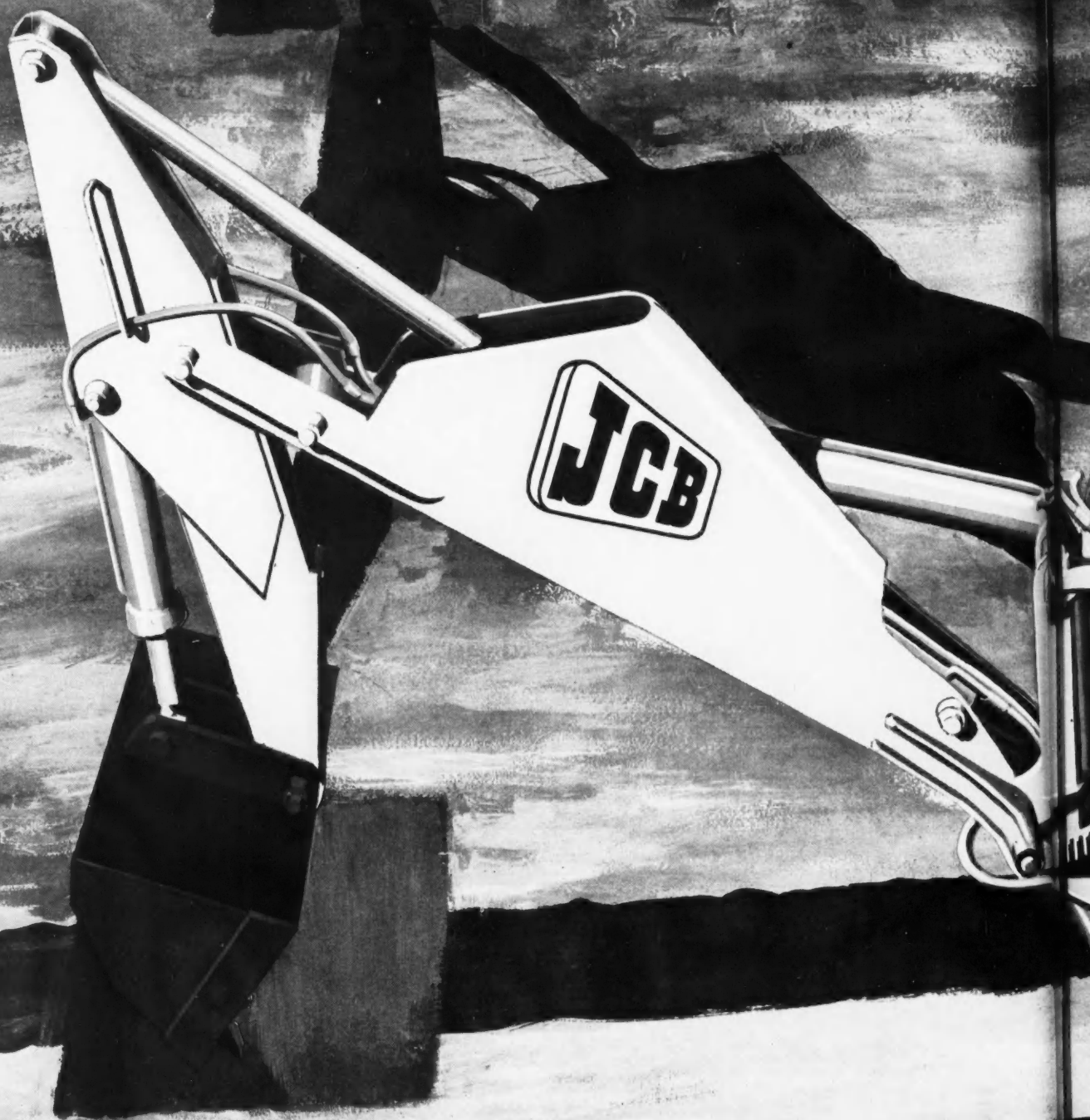
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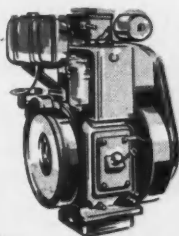


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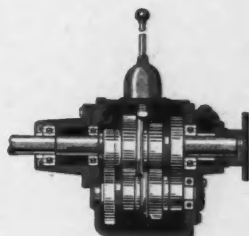
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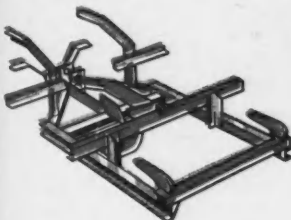
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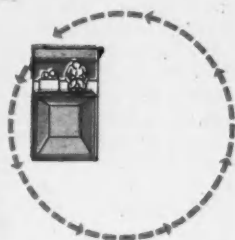
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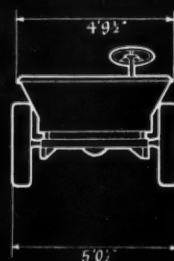
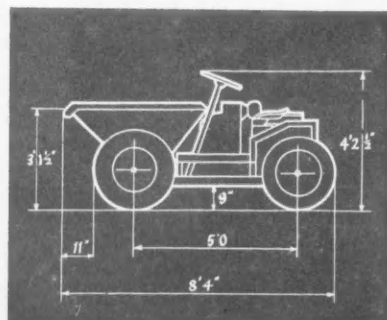
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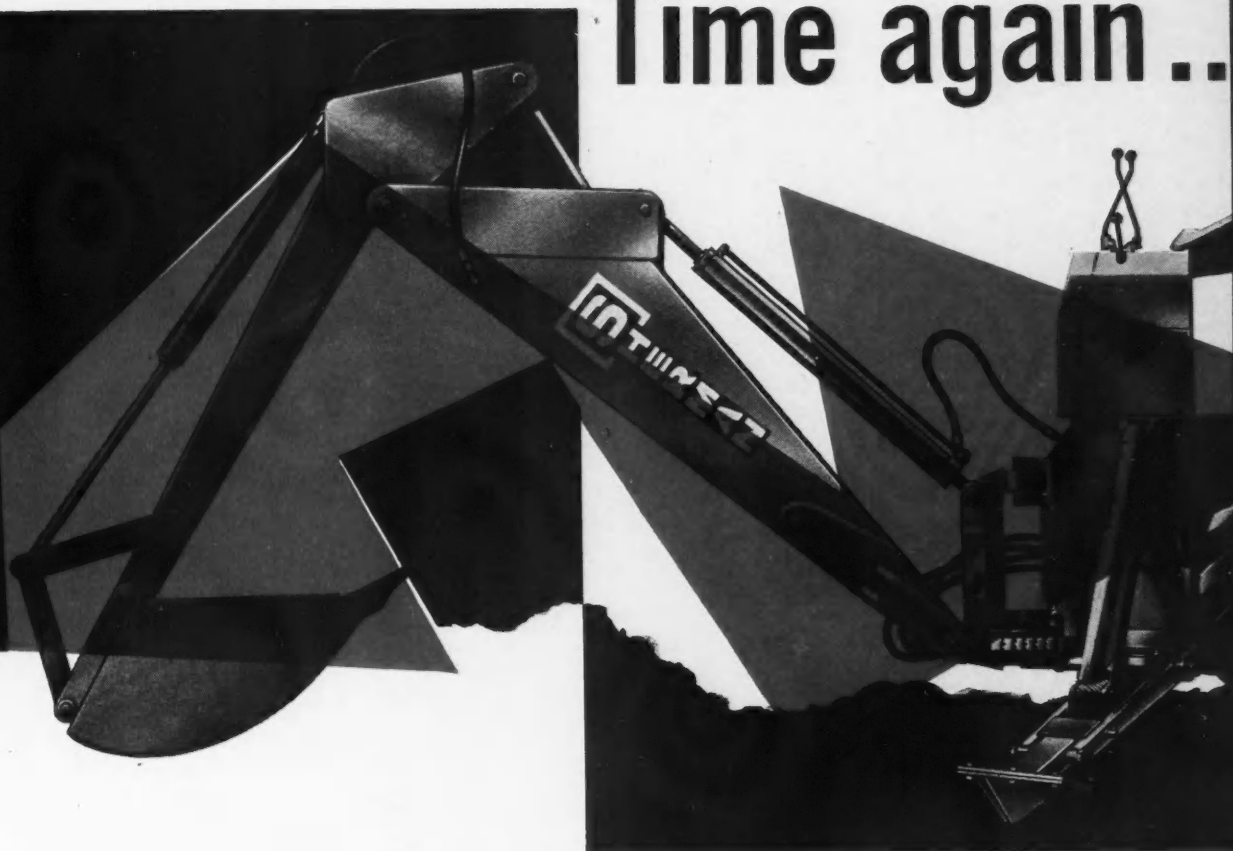


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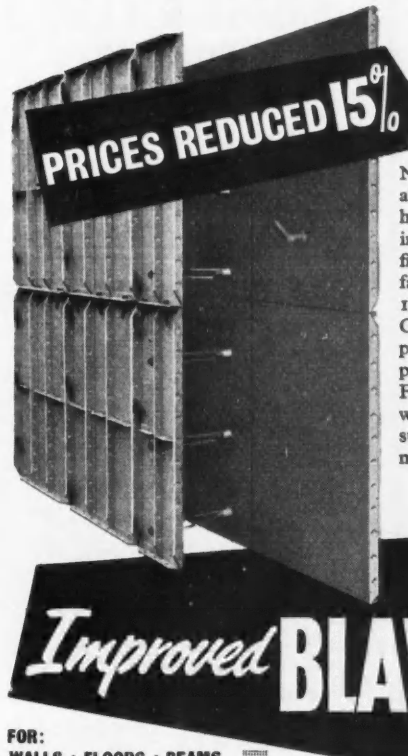
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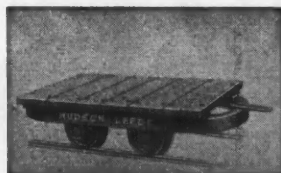
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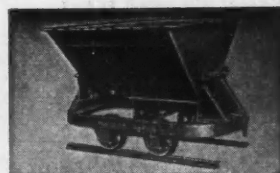
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Three 10RBs, 1940/51, Shovels and Draglines.
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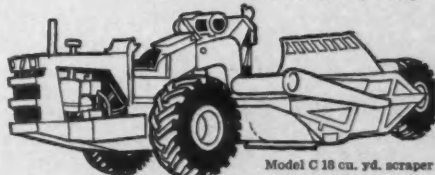
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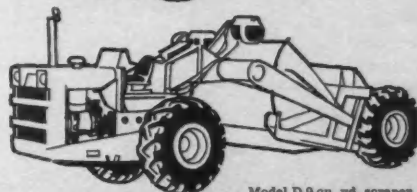
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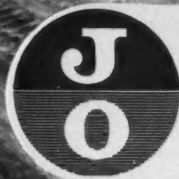


Model C 18 cu. yd. scraper



Model D 9 cu. yd. scraper

One of the LeTourneau-Westinghouse C Tournapulls clearing the ground for a new air strip being built at Lakenheath, Norfolk.

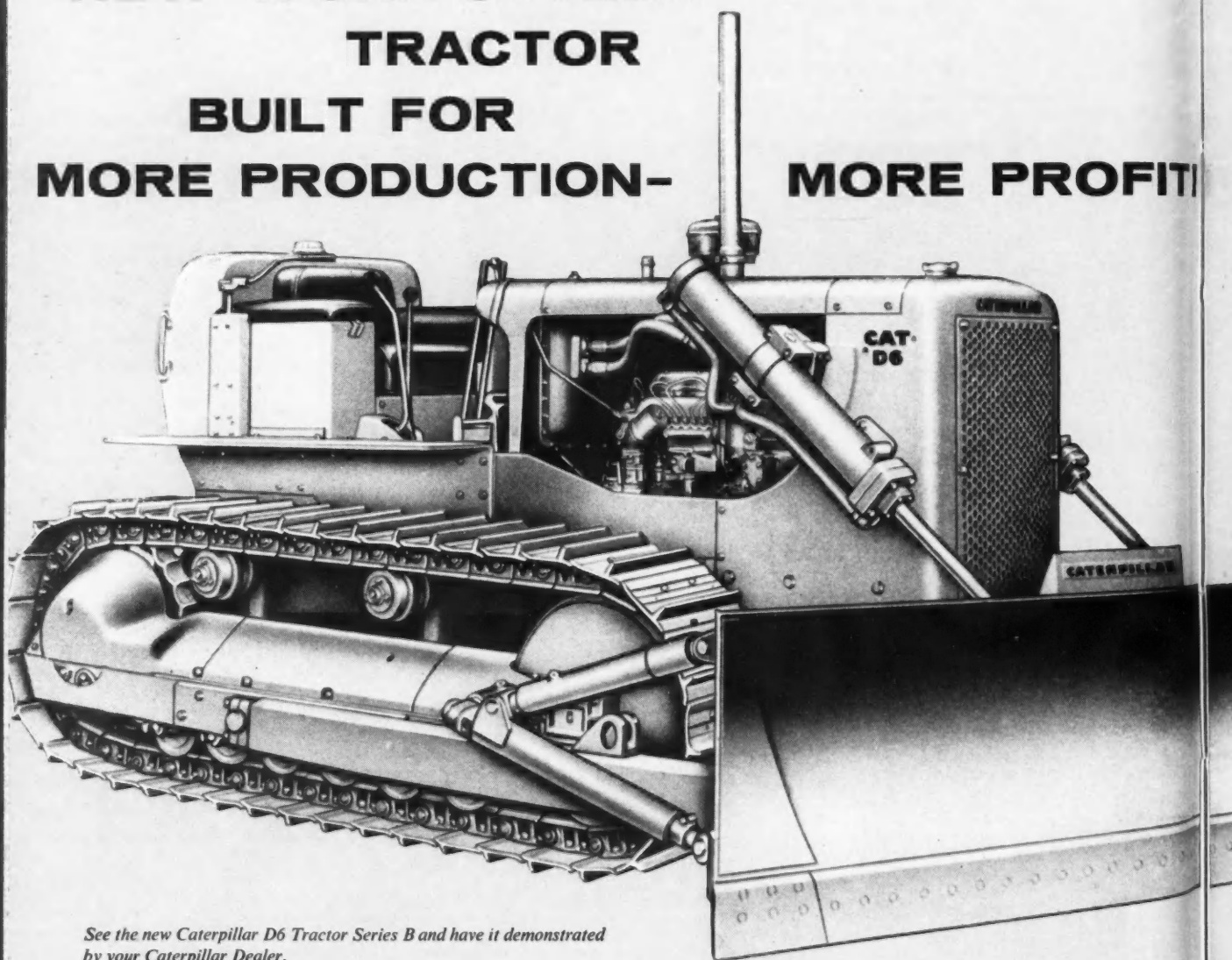


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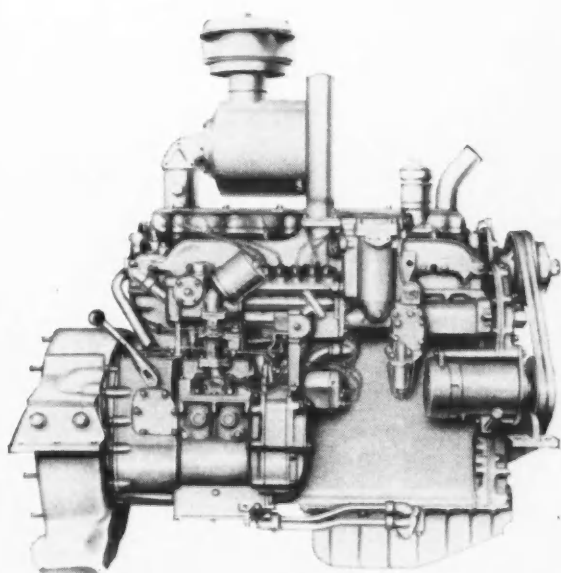


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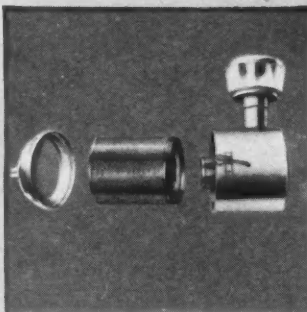
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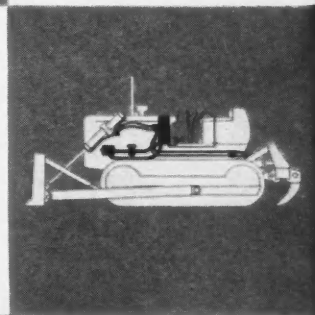


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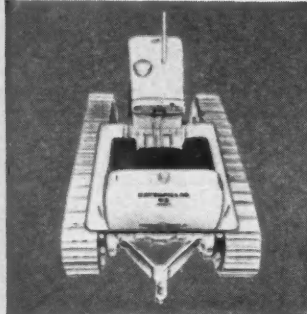
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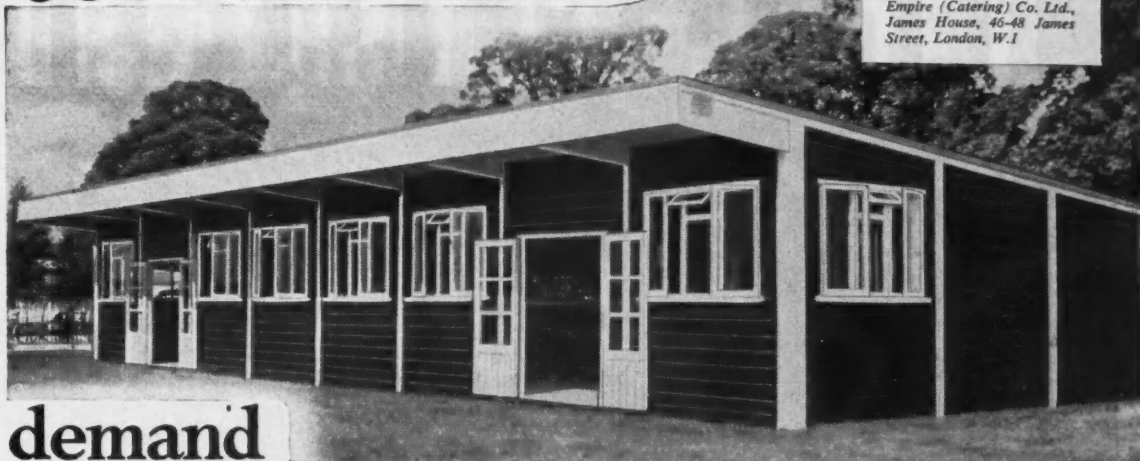
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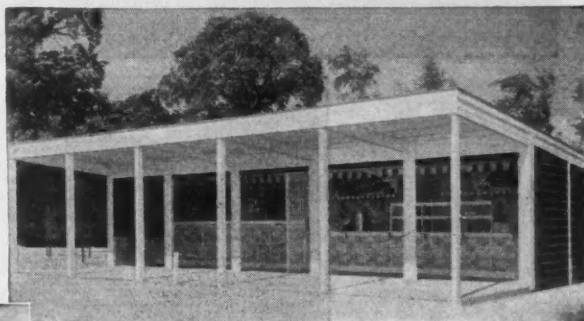
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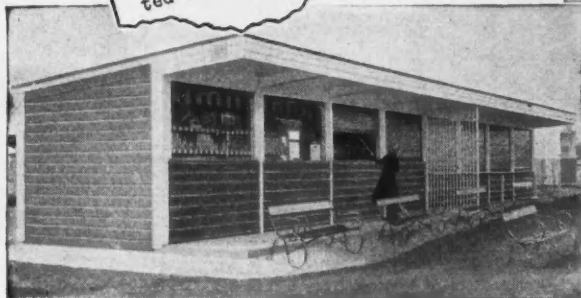
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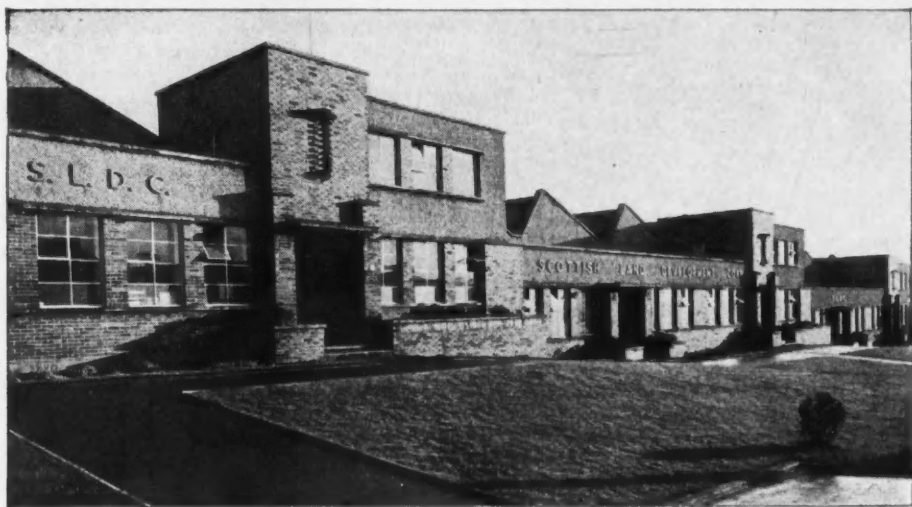
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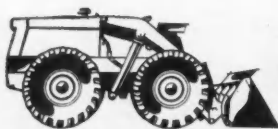
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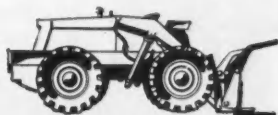
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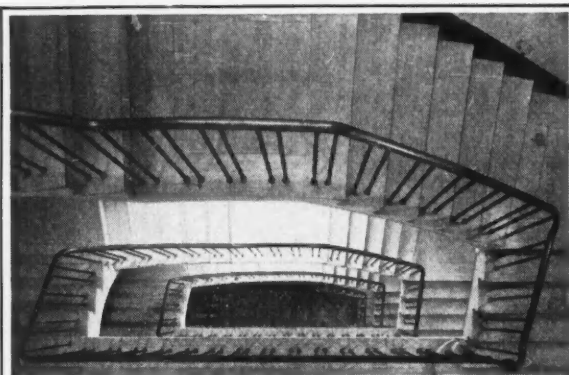
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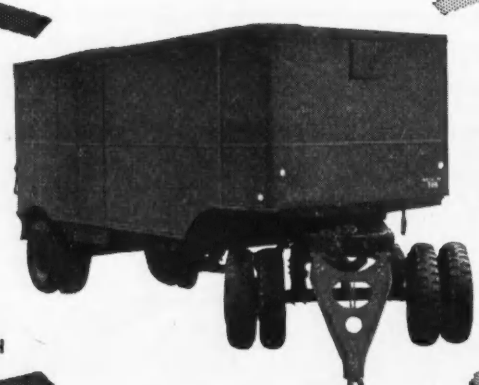
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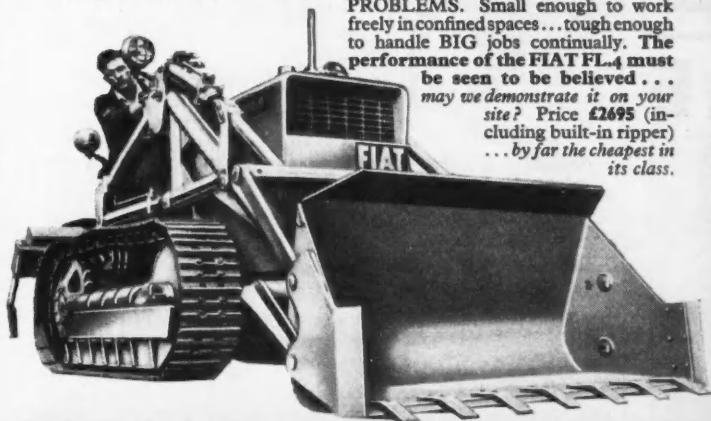
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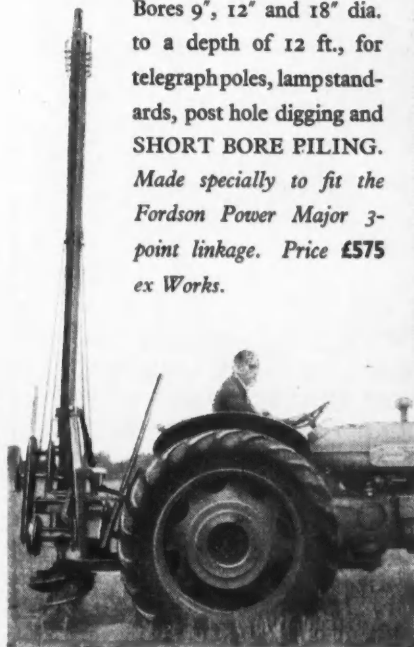
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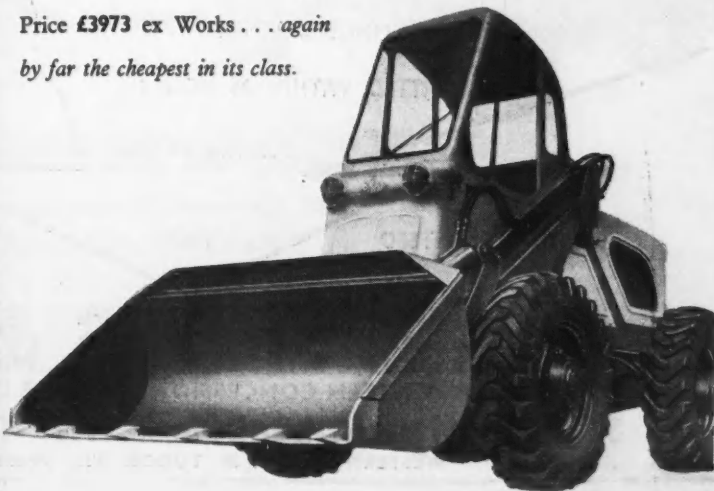


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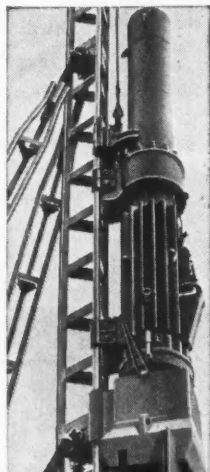
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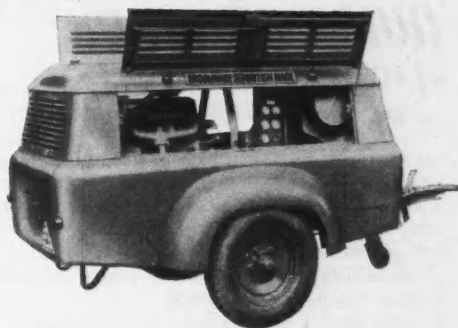
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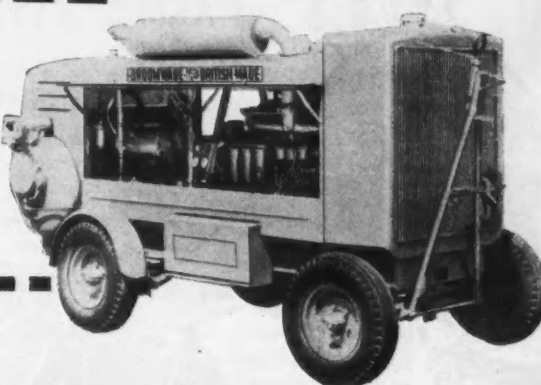
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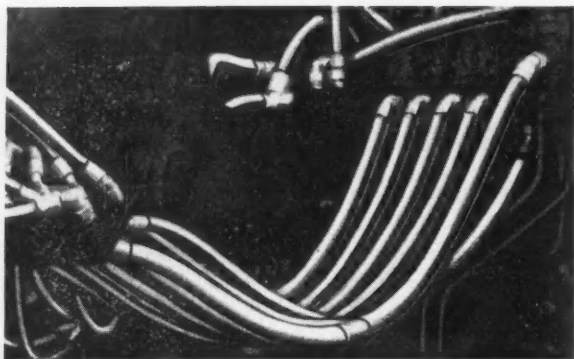
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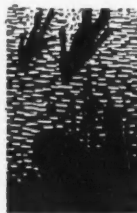
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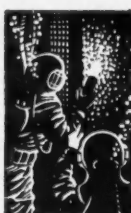
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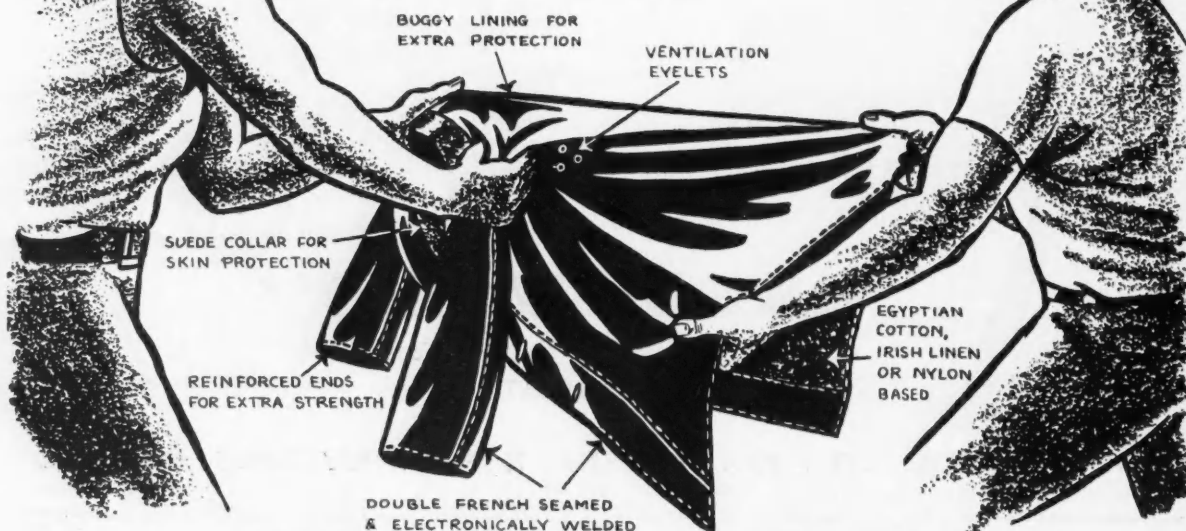
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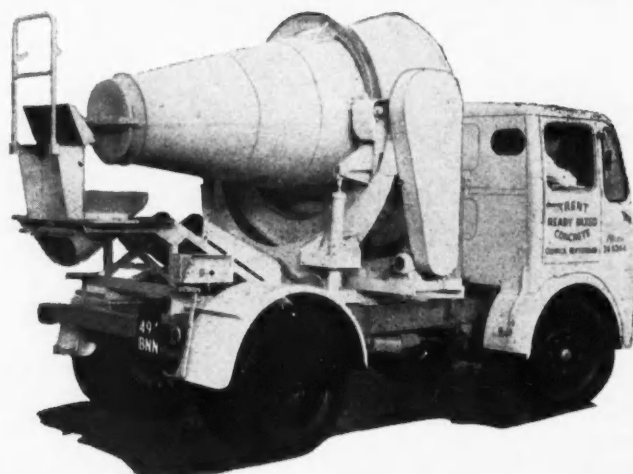
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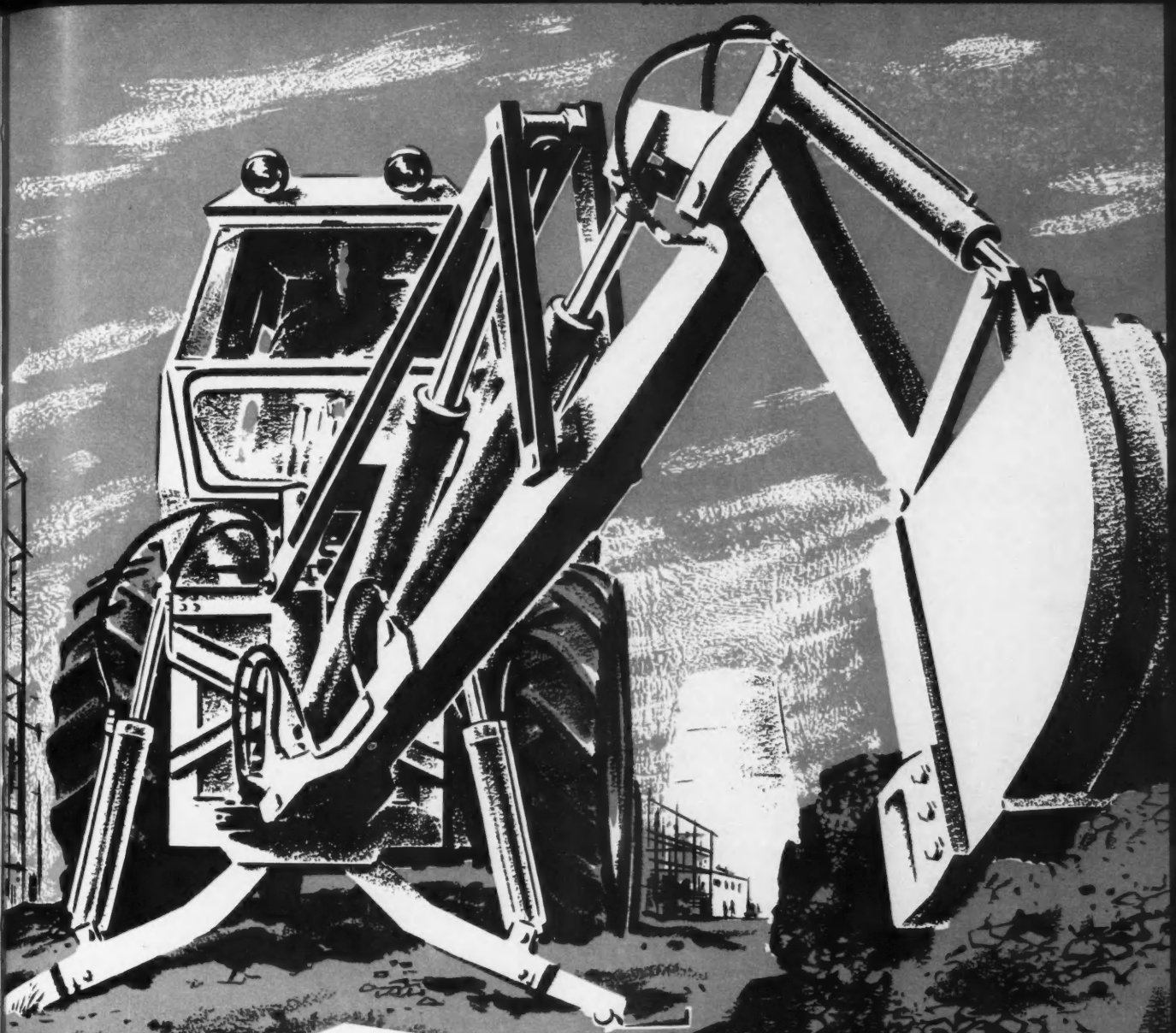
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Portsmouth Road, Thames Ditton, Surrey

Tel: EMBerbrook 5511
and 6147 (night 6147)

Automatic tipping is only ONE of the *Loadmaster's* advantages

Rapid erection

Loadmaster hoists need no skilled labour. No site preparation required.

Smooth operation

Spigot guides ensure smooth running.

Easy to transport and store

Basic components are small and compact...easily handled by normal traffic—lorry, dumper, etc.

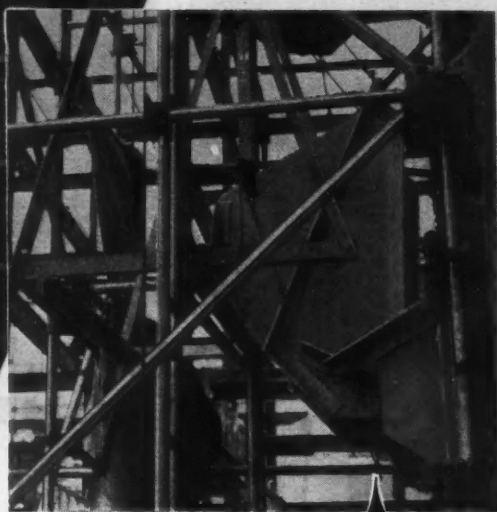
Super performance

Platform speeds up to 250 ft. per minute. Long-life bearings fitted throughout.

Mark 1: 20 cwt. capacity. 12 cu. ft. automatic tipping-skip.

Mark 2: 30 cwt. capacity. 18 cu. ft. automatic tipping-skip.

Automatic tipping at working height up to 500 ft. ensures speedy placing of concrete.



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HOISTS



A.C.E. MACHINERY LTD • BRIXTON • LONDON • S.W.2

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Telegrams: Auscon Telex London

and at Brentford, Middlesex

ACE 90

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WOOD, PRITCHETT & PARTNERS LTD

THE ONLY ORGANISATION IN GREAT BRITAIN SUPPLYING WORLD-WIDE



AHEAD OF SCHEDULE....

OUR SERVICE CAN MAKE THIS A POSSIBILITY
THIS IS THE MODUS OPERANDI . . .

WE PROVIDE—

Productive organisation on site to execute efficiently the working specification of contract, incorporating:—

LABOUR—

Crane, excavator and fork lift truck operators, stenographers, clerks, mechanics, fitters, painters, riggers, production control personnel, warehousemen, welders, carpenters, truck drivers, etc., etc.

EQUIPMENT—

Mobile Cranes, Fork Lift Trucks, Lorries, Compressors, Excavators, Welding Sets, Machinery Tools, Tractors, etc., etc.

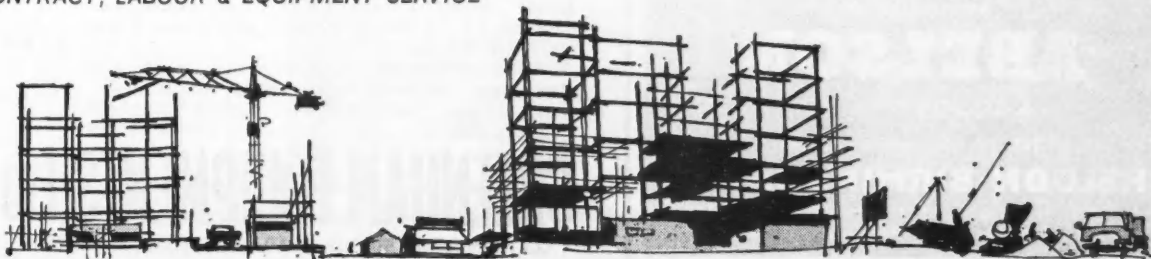
ECONOMICALLY—

Attractive "all-in" hourly rates for men and machinery—home or abroad—designed to reduce contractors' overheads and eliminate contract delays.

FOR FURTHER PARTICULARS OF THE ABOVE SERVICE
PLEASE WRITE OR 'PHONE:—

30/38 HAMMERSMITH BROADWAY · LONDON W.6 · RIVerside 2224
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CABLE ADDRESS: MECHQUIP · LONDON

CONTRACT, LABOUR & EQUIPMENT SERVICE



Buildmaster Cranes

—Still ahead

British
built
by

**RUSTON -
BUCYRUS**

THE CRANE OF ADVANCED DESIGN ★

* The first Tower Crane
built with rectangular
hollow section tube.



This photograph of one of the first
RUSTON BUCYRUS
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CRANES
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Buildmaster Tower Cranes are being batch produced
in the RUSTON-BUCYRUS works at Lincoln
for delivery in the spring of 1960

DEMAND IS ALREADY HEAVY - ORDER NOW TO MINIMISE DELAY

ENQUIRIES TO:-

ABELSON

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Tel: SHEldon 2424 (10 lines) Grams: Abelson, Birmingham

SHELDON · BIRMINGHAM 26

London Office: 60/62 Clapham Rd | Manchester Office: 100 Oxford Rd
London, S.W.9 Tel. RELiance 7081 | Manchester. Tel. ARDwick 1328

THE GREENHAM GROUP

Selected Items from Stock:—

DUMPERS

15cwt. Benford, Petter Diesel, excellent condition. £175

15cwt. Liner Roughrider, Petter Diesel, excellent condition. £175

CONCRETE MIXERS

5/3½ Blaw Knox, Ruston Petrol, on two pneumatic wheels, excellent condition. £90

7/5 Benford, Tilting Drum, Hopperfed. Petter Diesel, overhauled. £195

10/7 Stothert and Pitt, Petter Diesel, good working order. £95

10/7 Stothert and Pitt, Lister Diesel, very good condition. £195

10/7 Rex, Rotary Drum, Hopperfed, water tank, Ruston 1VTH Diesel. Excellent condition. £250

14/10 Rex, Rotary Drum, Hopperfed, water tank, Ruston 1VSH Diesel. Reconditioned. Choice of six. £300

14/10 Rex, as above but High Discharge. Choice of three. £325

14/10 Rex, electric motor, 400/440/3/50. Complete with integral weighgear. £475

21/14 Stothert and Pitt, Lister Diesel. Low discharge. Excellent condition. Choice of two. £350

CONCRETE PLANT

14 cu. ft. Road Machines Double-bucket Swing Weighbatcher, overhauled and repainted. Choice of four. £165

10-ton Portasilo, good condition, repainted. £275

30-ton Portasilo, rectangular discharge hopper, good condition, repainted. £375

Allam Poker vibrators electric, c/w flexible drive and Poker head. Very good condition. Choice of two. each £25

Vibrosoil Compactors, J.A.P. Petrol, very good order. each £125

MONO-RAIL EQUIPMENT

We have a large selection of Mono-Rail equipment in excellent condition. Power and trailer wagons, straight and curved rails, stands. Supplied in complete sets or as required.

PUMPS

2in. Alcon, Petrol Engine, good condition. £25

3in. Sykes Petrol, lift and force model. £15

6in. Sykes Diesel, centrifugal. £50

3in. hand pump. £2

Vac-Seal centrifugal Pump by International Combustion, Ltd. Capable of handling heavy proportion of solids. New 1954, Electric 400/440/3/50. First-class condition. £175

HOISTS

A.C.E. and B.H.C. Scaffold Hoists, Petrol Engine, very good condition. each £55

5/7cwt. Warry J.A.P. Petrol, two pneumatics. £45

7/10cwt. Wickham Static, Petter or Ruston Diesel, complete with masts, first-class order. £125

10cwt. Wickham Static, Ruston Diesel, complete with masts. Choice of three machines. Excellent condition. £145

15/20cwt. B.H.C. Centre Slung, Petter Diesel, overhauled, complete with Hopper. £295

One 1958 A.C.E. 20cwt. Passenger Hoist "Sky-master." Serial No. 15258/23644. Includes eight 18ft. Mast sections and six electrically controlled gates. Fitted 15-man cage. Now erected in London, E.C.2., the hoist can be seen in operation until end of January. £2,500

MISCELLANEOUS

Parmanco horizontal and vertical mobile drill, Series 70585. Ford V8 Petrol. Completely overhauled. Offers.

GREENHAM EQUIPMENTS LTD

CLAYTON ROAD, RUISLIP ROAD, GREENFORD, MIDDLESEX

Let's ring VIKING 3651

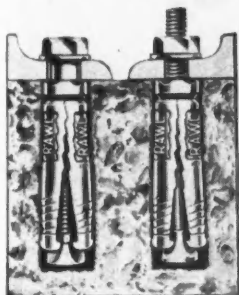


A **RAWLPLUG** HEAVY DUTY FIXING DEVICE

RAWLBOLTS

There is no waiting for cement to harden when you use Rawibolts. The holes are drilled with a Rawltool to the exact size, the Rawlbolts dropped in and after the machine has been positioned the bolts are tightened. The expansion of the members locks the bolts in the holes. They cannot work loose through vibration or shock. The machine can be put into operation immediately.

Rawlbolts have earned a sterling reputation for strength and reliability throughout the world—they are used by the million every month. Rawlbolts grip by *expansion*—their strength as a fixing is based on the enormous compressive strength of concrete itself.




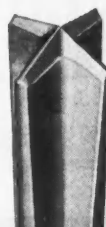




RAWLBOLTS ARE MADE IN TWO TYPES

For fixing heavy machinery to floors there is the Loose Bolt type of Rawlbolt which enables the machine to be slid into position after the Rawlbolt has been inserted. For wall fixings use the Bolt Projecting type which will position the fixing before tightening up.



Please write for Chart and descriptive literature.

Tools that save time For hole boring there is a big range of high efficiency Rawlplug tools for use by hand, electric and air power.

 <p>RAWLDRILLS For hand boring for Rawlbolt sizes A to G.</p>	<p>STARDRILLS For hand boring for all Rawlbolt sizes.</p> 	 <p>DURIUM MASONRY DRILLS For use in hand and electric drills for Rawlbolt sizes C to G.</p>	<p>TRIFORM DRILLS For use in electric hammers for Rawlbolts sizes C to K.</p> 	 <p>DURIUM HAMMER DRILLS For use in electric hammers for Rawlbolt sizes C to J.</p>	<p>P. H. BITS For use in pneumatic hammers for Rawlbolt sizes E to K.</p> 
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RAWLPLUG CO. LTD., CROMWELL ROAD, LONDON, S.W.7.

THE WORLD'S LARGEST MANUFACTURERS OF FIXING DEVICES.

BULK EXCAVATION

problems solved!



Our MODERN FLEET OF EXCAVATION PLANT

Including 7½ cubic yard shovels, 22 ton Euclids and Rubber Tyred Scrapers is capable of a high weekly output. We welcome enquiries from contractors engaged on Major Road Contracts and other work offering

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Hydraulic Angledozer ... now with extra zest
for the toughest jobs ... **NOW POWERED
WITH THE 51.8 B.H.P. FORDSON POWER MAJOR
DIESEL ENGINE!**



THE CRAWLER WITH THE LOW PRICE AND HIGH PERFORMANCE

- * Fordson Power Major Diesel Engine, giving 51.8 b.h.p. at 1,600 r.p.m., provides more-than-ample power for every job.
- * Five forward gears ... two reverse.
- * High traction ... low ground pressure ... less churning in wet weather.
- * Blade length 7' 4". Angle of tilt from straight — 26 either way. Blade tilt between ends 8". Blade dig below ground 9". Blade lift above ground 2' 4".
- * Every County Dealer is fully equipped to give fastest service and on-the-site-repairs, with lowest charges for replacement parts and reconditioning.

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BY CONTRACT

YARDAGE BASIS. PLANT HIRE WITH OPERATORS

SUB-CONTRACT

LIMAS 1201 DRAGLINE WITH FACE SHOVEL EQUIPMENT TD24, 20 & 18 BULLDOZERS

D TYPE TOURNAPULLS-54, 22 & 19RB EXCAVATORS WITH FACE SHOVEL EQUIPMENT

D8 TRACTORS & SCRAPERS & SUITABLE BULLDOZER EQUIPMENT

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CABLES CONTRACTS. NOTTINGHAM 66264 (Ten Lines)

CONTRACTS

MERIONETH COUNTY COUNCIL.
HIGHWAYS AND BRIDGES DEPARTMENT.

TENDERS FOR PLANT.

TENDERS are invited for the UNDERMENTIONED PLANT for delivery to the above Department during the First Week of April, 1960:

- One Tractor or similar type of Excavator.
- Two Dumpers.
- Four Concrete Mixers up to 7/5 type.
- Two 5/6-ton Short-wheelbase Tipper Lorries, Diesel Engines.

Two Lorries (3-ton Morris Commercial 1448 and 7-ton petrol Bedford Tipper) are offered in part-exchange for the new lorries. These lorries may be inspected by appointment with the County Surveyor at these Offices. Tenders, accompanied by makers' specification and other details, enclosed in a plain sealed envelope endorsed "Tender for Plant," should reach the COUNTY CLERK, County Offices, Dolgellau, not later than WEDNESDAY, the 10th February, 1960.

BOROUGH OF HORNSEY.

ANNUAL SUPPLY OF SODIUM DISCHARGE LAMPS.

TENDERS are invited for SUPPLY of the ABOVE for a period ending 31st March, 1961. Documents on application to Borough Engineer, Town Hall, N.8.

Last date for receipt of Tenders: MONDAY, 8th February, 1960.

W. B. MURGATROYD,
Town Clerk.

BOROUGH OF LEYTON.

MAIN DRAINAGE—WEST LEYTON DRAINAGE AREA NO. 4—SECTION 1.

An extensive programme of MAIN DRAINAGE WORK is to be carried out in the Borough of Leyton and application is invited from civil engineering contractors for inclusion in a selected list to be invited to TENDER for the ABOVE SCHEME.

Tender documents will be available during February, 1960, and it is anticipated that work will commence in March or April, 1960.

The work comprises some 2,100 lin. yd of Super-imposed Sewers, varying from a 9in. dia. Surface Water Sewer over a 27in. dia. Foul Water Sewer to an 8ft. x 2ft. 9in. Foul Water Sewer over an 8ft. x 4ft. 3in. Surface Water Sewer, together with 634 lin. yd. of 5ft. x 4ft. Foul Water Sewer, 197 lin. yd. of 8ft. x 4ft. Surface Water Sewer, and the requisite Manholes. Excavation will be in open trench throughout, depths varying from 7ft. to 25ft.

Further details of the proposed scheme can be obtained on application to the Borough Engineer and Surveyor, Town Hall, Leyton, E.10, and names and addresses of persons wishing to be considered for inclusion in the selected list are to be received by the undersigned not later than 2nd FEBRUARY, 1960.

D. J. OSBORNE,
Town Clerk.

BOROUGH OF EPSOM AND EWELL.

FOOTPATH—WHITE HORSE DRIVE TO ROSEBANK AND WEST STREET, EPSOM.

The CORPORATION invite TENDERS from public works contractors for the CONSTRUCTION of a FOOTPATH 330 ft. long, comprising Tarmacadam Footpath, Foundation and Edging.

Conditions of Contract can be inspected at, and copies of the Plans, Specification, Bill of Quantities and Form of Tender obtained from the Office of MR. COLIN COBBETT, A.M.I.C.E., M.I.Mun.E., Borough Engineer and Surveyor, Town Hall, Epsom, during working hours, upon payment of a deposit of £2 2s. Deposits will be returned to contractors submitting a bona-fide Tender not subsequently withdrawn.

Tenders must be delivered to me at the address mentioned below, not later than 12 Noon on MONDAY, 8th February, 1960, and no Tender will be received and considered unless it is enclosed in a plain sealed envelope endorsed "Tender for Footpath Works—White Horse Drive to Rosebank, Epsom." This envelope must not bear any mark or name indicating the sender.

The Corporation do not bind themselves to accept the lowest or any Tender.

EDWARD MOORE,
Town Clerk.

Town Hall,
The Parade,
Epsom, Surrey,
January, 1960.

HODDESDON URBAN DISTRICT COUNCIL.

LAY-BY, THE DRIVE, FORRES ESTATE, HODDESDON.

TENDERS are invited for the CONSTRUCTION of a LAY-BY with Paved Area in Front of the Four Shops at THE DRIVE, Hoddesdon. The Contract will comprise the provision of materials and Labour to carry out the Works.

Form of Tender, Specification and Bills of Quantities are obtainable from the Council's Engineer and Surveyor, "Woodlands," High Street, Hoddesdon, where the General Conditions of Contract and Drawings may be inspected during normal office hours.

Tenders, in the envelope provided, must be received by me before 12 Noon on FRIDAY, 5th February, 1960. The Council do not bind themselves to accept the lowest or any Tender.

LEONARD G. JOHNES,
Clerk of the Council.

Council Offices,
High Street,
Hoddesdon,
Herts.,
15th January, 1960.

VIEWSLEY AND WEST DRAYTON URBAN DISTRICT COUNCIL.

HORTON ROAD IMPROVEMENT—STAGE III. HIGH STREET TO GLOUCESTER VILLAS.

TENDERS are invited for the ABOVE WORKS, which comprise Kerbing, Concrete Haunch, Footways, Drainage Works and Surfacing approx. 3,200 sq. yd. of Carriageway with Gravel Asphalt.

The Conditions of Contract and Drawings may be seen at the office of the Engineer and Surveyor, from whom the Specification, Bill of Quantities and Form of Tender may be obtained on payment of a deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender and the return of all documents.

Tenders, in plain sealed envelopes endorsed "Tender for Horton Road Improvement," must be delivered to the undersigned not later than Noon on MONDAY, 15th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

ARTHUR BOOTE,
Clerk of the Council.

Drayton Hall,
West Drayton,
9th January, 1960.

CONTRACTS

COUNTY BOROUGH OF WARRINGTON.

ANNUAL TENDERS.

The Highways, Sewerage and Planning Committee of the Council of the County Borough of Warrington are prepared to receive FIXED-PRICE TENDERS for the COMMITTEE'S REQUIREMENTS during the 12 months ending 31st March, 1961. Materials:

- (1) Concrete Flags.
- (2) Concrete Kerbs.
- (3) Stone Kerbs.
- (4) Granite Chippings.
- (5) Bricks—Engineering, Common and Fire Bricks.
- (6) Stoneware Pipes, Bends, Junctions, Gullies, etc.
- (7) Portland Cement.
- (8) High Alumina Cement.
- (9) Sand (Plastering and Concreting).
- (10) Gravel.
- (11) Broken Stone.
- (12) Pre-mixed Water-bound Limestone Macadam.
- (13) Tarmacadam.
- (14) Bituminous Macadam.
- (15) Hot-rolled Asphalt (Supply and Laying).
- (16) Hot Mixed Bituminous Macadam (Supply and Laying).
- (17) Surface Dressing.
- (18) Fine Cold Asphalt.
- (19) Tar Bituminous Compounds and Cold Emulsions.
- (20) Cast-iron Manhole Covers and Frames and Gully Grates and Frames.
- (21) Brushes—Highways and Street Cleansing Departments (including Rotary Brushes).
- (22) Paint Brushes.
- (23) Concrete Fence Posts.
- (24) Concrete Clothing Posts.
- (25) Concrete Lighting Columns.
- (26) Steel Lighting Columns.
- (27) Lead and Solder.
- (28) Glass.

Contractors are requested to state the number of the form required, as set out above, when applying. Specifications, Forms of Tender and all further information may be obtained from the office of the Borough Engineer and Surveyor, Town Hall, Warrington, on and after Monday, the 25th January, 1960, at which place Tenders, was-sealed in the printed envelope supplied, must be delivered before 12 o'clock Noon on MONDAY, the 8th February, 1960.

Any contractor whose Tender for goods is accepted will be required to observe the recognised customs and conditions as to the rates of wages and working hours as laid down in the standing orders of the Council. The Committee reserve the right to divide the Contracts in any way they may think fit, and do not bind themselves to accept the lowest or any Tender.

J. Y. HUGHES, M.I.C.E.,
Borough Engineer and Surveyor.

Borough Engineer and Surveyor's Office,
Town Hall,
Warrington.

15th January, 1960.

BOROUGH OF UXBRIDGE.

CONTRACT NO. 430.

REPLACEMENT OF MAIN TOWN SOIL SEWER. UXBRIDGE.

The Borough Council invites contractors with experience of similar work, and who are willing to TENDER for the ABOVE CONTRACT, to submit their names and give full details of such experience to HAROLD E. G. STRIPP, A.M.I.C.E., Borough Engineer, 263 High Street, Uxbridge, by the First Post on MONDAY, the 8th February, 1960.

The Works will comprise the Laying of approx. 1,800 yd. of 18in. dia. to 36in. dia. Specially Strengthened Reinforced Concrete Pipes, and 250 yd. of 14in. dia. to 24in. dia. Cast-iron Pipes, together with the Construction of Manholes, an Inverted Siphon Hatchbox and Penstock Chambers and ancillary Works.

From the names submitted a selected list of contractors will be chosen and subsequently provided with the Tender documents.

E. RONALD WEST,
Town Clerk.

Council Offices,
263, High Street,
Uxbridge,
Middx.

CITY OF ROCHESTER.

WARREN WOOD REDEVELOPMENT—STAGE IV.

26 THREE-BEDROOM HOUSES AND 12 FLATS.

TENDERS are invited for the ERECTION of the ABOVE DWELLINGS. Conditions of Contract, Bills of Quantities and Form of Tender will be forwarded on payment of £3 3s., at the office of J. A. PEEL, Esq., A.M.I.C.E., A.M.I.Mun.E., The City Surveyor, 66 Maidstone Road, Rochester.

The deposit will be returned on receipt of bona-fide Tenders or on the notification of inability to Tender, together with the return of the documents.

Alternative Tenders are required, one based on the Fluctuations Clause of the R.I.B.A. Form of Contract and another based on a Fixed-Price Tender.

Tenders should be enclosed in the suitably endorsed envelope provided, and documents returned in another endorsed envelope.

Tenders must be sealed and delivered to the Town Clerk, Guildhall, Rochester, not later than 12 Noon on MONDAY, 7th March, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

PHILIP H. BARTLETT,
Town Clerk.

Guildhall,
Rochester.

13th January, 1960.

LEDBURY URBAN DISTRICT COUNCIL.

WORKS OF WATER SUPPLY.

CONTRACT NO. 1.

TENDERS are invited for the CONSTRUCTION of approx. 3,250 lin. yd. of 4in. dia. 8-in-Iron Pipes, with incidental works, also for the ERECTION of a SMALL PUMPING STATION, including ancillary work in connection with the installation of new pumping plant, in accordance with the Drawings, Specification and Bills of Quantities prepared by the Engineers, MESSRS. A. H. S. WATERS AND PARTNERS, 25 Temple Row, Birmingham, 2.

The Drawings may be seen at the General Conditions of Contract, Specification, Bills of Quantities and Form of Tender may be obtained from the Offices of the undersigned, or of the Engineers, on or after MONDAY, 25th January, 1960, on payment of a deposit of Five Guineas, which will be refunded upon receipt of a bona-fide Tender and the return of all documents.

Sealed Tenders, on the form supplied and in the endorsed envelope provided, are to be delivered to me at my Office not later than Noon on FRIDAY, 19th February, 1960.

The Council does not undertake to accept the lowest or any Tender.

D. B. W. DYKES,
Clerk of the Council.

Council Offices,
Church Street,
Ledbury, Herefordshire.

January, 1960.

CONTRACTS

KENT COUNTY COUNCIL.

ANNUAL TENDERS are invited for the SUPPLY of the UNDERMENTIONED ROAD MATERIALS and SERVICES for the year commencing 1st April, 1960:

- | | |
|--|---|
| Tender Form No. | Material: |
| (1) Granite or Slag Chippings. | DRY STONE: |
| (2) Kest Ragstone. | (1) Granite or Slag Chippings. |
| (3) Gravel Aggregates. | (2) Kest Ragstone. |
| (4) Granite or Slag Chippings. | (3) Gravel Aggregates. |
| (5) Bituminous Macadam (Supply and/or Supply and Lay). | COATED STONE: |
| (6) Cold Asphalt (Supply and/or Supply and Lay). | (5) Bituminous Macadam (Supply and/or Supply and Lay). |
| (7) Lense Tar Surfacing (Supply and/or Supply and Lay). | (6) Cold Asphalt (Supply and/or Supply and Lay). |
| (8) Hot Rolled Asphalt (Supply and/or Supply and Lay). | (7) Lense Tar Surfacing (Supply and/or Supply and Lay). |
| (9) Tarmacadam (Supply and/or Supply and Lay). | (8) Hot Rolled Asphalt (Supply and/or Supply and Lay). |
| (10) Tar or Bitumen Dressing. | (9) Tarmacadam (Supply and/or Supply and Lay). |
| (11) Cold Emulsion. | (10) Tar or Bitumen Dressing. |
| (12) Concrete Products. | (11) Cold Emulsion. |
| (13) Plastic Traffic Lines. | (12) Concrete Products. |
| (14) Heating and Planing of Carriageways. | (13) Plastic Traffic Lines. |
| (15) Hire of Mechanical Haulage. | (14) Heating and Planing of Carriageways. |
| (16) Hire of Mechanical Plant. | (15) Hire of Mechanical Haulage. |
| (17) Hire of Tamping and Finishing Machine and Laying of Coated Macadam. | (16) Hire of Mechanical Plant. |

Full details, including Specifications and Forms of Tender, can be obtained from the County Supplies Officer, Supplies Department, Sandling Road, Maidstone.

GERALD BISHOP,
Clerk of the County Council.

County Hall,
Maidstone.

COUNTY BOROUGH OF MERTHYR TYLFI.

ANNUAL TENDERS FOR SUPPLIES—1960/1961.

TENDERS are invited for the SUPPLY and DELIVERY of the UNDERMENTIONED REQUIREMENTS for the 12 months commencing 1st April, 1960:

- (1) Ironmongery.
- (2) Road Macadam.
- (3) Crushed Stone/Slag Aggregates.
- (4) Precast Concrete Products.
- (5) General Builders' Stores.
- (6) Cleaning Materials.
- (7) Brushes.
- (8) Electrical Goods.
- (9) Iron Castings.
- (10) Glazed Stoneware Products.
- (11) Slag Ballast.
- (12) Gritting Materials.
- (13) Natural Stone Products.
- (14) Ready Mixed Concrete.

Documents will be available to bona-fide merchants, manufacturers, and other suppliers, on application to the Borough Engineer and Surveyor, Town Hall, Merthyr Tydfil, Glam.

Applicants must state which of the goods they wish in tender for, and Tenders must be sent in a sealed envelope endorsed "Tenders for —," but bearing no mark or name indicating the sender, to the undersigned not later than First Post on SATURDAY, 20th February, 1960.

The Council reserve the right to accept Tenders in whole or in part, but do not bind themselves to accept the lowest or any Tender.

T. S. EVANS,
Town Clerk.

Town Hall,
Merthyr Tydfil, Glam.

21st January, 1960.

COUNTY BOROUGH OF BURY.

CONSTRUCTION OF BOWLING GREEN.

TENDERS invited for CONSTRUCTION OF BOWLING GREEN and ancillary works at HOYLE PLAYING FIELDS.

Contract documents from Borough Engineer, Town Hall, Bury, where Drawings may be inspected.

Tenders, endorsed "Bowling Green—Hoyle Playing Fields," must reach me not later than 8th FEBRUARY, 1960.

EDWARD S. SMITH,
Town Clerk.

Town Hall,
Bury.

13th January, 1960.

CITY OF WORCESTER.

HILLBOROUGH HOME FOR THE AGED, TALLOW HILL, WORCESTER.

PROVISION OF ADDITIONAL SANITARY ACCOMMODATION.

TENDERS are invited for the ABOVE WORK, which comprises TWO 3-STORY BLOCKS with a total Floor Area of approx. 1,900 super. ft., together with other minor alterations.

Documents obtainable from City Engineer and Surveyor, 22 Bridge Street, Worcester, on deposit of Three Guineas (cheques payable to Worcester Corporation), which will be refunded after receipt of a bona-fide Tender and the return of Tender documents.

Tenders to be posted to the undersigned to arrive not later than MONDAY, 29th February, 1960.

BERTRAM WEBSTER,
Town Clerk.

Guildhall,
Worcester.

URBAN DISTRICT OF TONBRIDGE.

ROAD AND SEWER CONTRACT.

TRENCH WOOD NORTH ESTATE.

TENDERS are invited for the FIRST STAGE ROAD WORKS and FOUL and SURFACE WATER DRAINAGE on the ABOVE HOUSING SITE. The Works comprise approx. 4,200 lin. yd. of Hardcore or Lean Concrete Roads, including Formation Excavation, Kerbing and Surface Water Drainage and the Provision of the Main Lengths of Foul and Surface Water Sewers to approx. 600 Houses.

Copies of the Specification, Bill of Quantities and Form of Tender can be obtained from the Engineer and Surveyor, Tonbridge Castle, Tonbridge, Kent, at whose office the Plans and Conditions of Contract can be inspected. A deposit of Two Guineas is required, which will be returned on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in plain envelopes, sealed and endorsed "Road and Sewer Contract—Trench Wood North," to be delivered to the undersigned not later than 12 Noon on MONDAY, 15th February, 1960.

The Council does not bind itself to accept the lowest or any Tender.

S. J. THORNE,
Clerk of the Council.

Tonbridge Castle,
Tonbridge,
Kent.

January, 1960.

CONTRACTS

COUNTY BOROUGH OF DONCASTER.

HIGHWAYS CONTRACT NO. 53.

RECONSTRUCTION OF A.I. BAWTRY ROAD.

TENDERS are invited for the WIDENING and RECONSTRUCTION of the ABOVE ROAD between ALSTON ROAD and the BOROUGH BOUNDARY, a length of approx. 1,400 yd.

The proposed works comprise the Laying of 700 lin. yd. 6in. dia. Salt Glazed Ware Surface Water Sewers; 1,100 lin. yd. 9in. dia. and 430 lin. yd. 12in. dia. Concrete Surface Water Sewers; 2,900 lin. yd. 5in. x 10in. P.C.C. Kerbs; 3,300 lin. yd. 6in. x 6in. P.C.C. Channels; 4,700 lin. yd. 2in. x 6in. P.C.C. Edging; 11,250 sq. yd. Bitumen Macadam Regulating Course to Existing Carriageway, and 6,300 sq. yd. Construction of Lean Concrete Foundation and Bitumen Macadam Base Course, together with Footpath Works, Manholes, Gullies, Gully Connections, and other ancillary works.

Form of Tender, Specification and Bills of Quantities may be obtained on payment of a deposit of £3 5s., refunded on receipt of a bona-fide Tender, from the Borough Surveyor, 2 Priory Place, Doncaster, at whose Office the Plans and Conditions of Contract may be inspected.

Tenders are to be received at the Office of the undersigned not later than 10 a.m. on MONDAY, 15th February.

The Council does not bind itself to accept the lowest or any Tender.

H. R. WORMALD,
Town Clerk.

1 Priory Place,
Doncaster.

BOROUGH OF RICHMOND (SURREY).

ANNUAL MAINTENANCE CONTRACTS.

TENDERS are invited for the FOLLOWING CONTRACTS for the period 1st April, 1960, to 31st March, 1961:

- (a) Maintenance of Highways—Carriageways.
- (b) Maintenance of Highways—Footways.
- (c) Maintenance of Highways—Heating and Planing.
- (d) Laying Plastic White Lines.

Contract documents can be obtained from the Borough Engineer and Surveyor, Hotham House, Heron Court, Richmond, Surrey, on application, stating which is required.

Tenders should be returned, in the envelope provided, by First Post on FRIDAY, 12th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

CLIFFORD HEYWORTH,
Town Clerk.

Town Hall,
Richmond, Surrey

CITY OF STOKE - ON - TRENT.

REDEVELOPMENT, LONGTON HALL ROAD HOUSING SITE—STREET WORKS.

The CORPORATION invite TENDERS from civil engineering contractors for CARRYING OUT WORKS on the ABOVE HOUSING ESTATE, area approx. 20 acres, comprising the Redevelopment and Construction of certain preliminary Street Works, Sewers and incidental works. Drawings and Conditions of Contract may be seen and Specification and Bills of Quantities obtained from the City Engineer and Surveyor, 100, High Street, Stoke-on-Trent, on payment of £3 deposit, which will be returned if a bona-fide Tender is received.

Tenders and priced Bills of Quantities (in the separate envelopes provided) must be delivered to the undersigned by 12 Noon on WEDNESDAY, 3rd February, 1960.

HARRY TAYLOR,
Town Clerk.

LITTLEBOROUGH URBAN DISTRICT COUNCIL.

The above Council invite TENDERS for the SUPPLY of the FOLLOWING MATERIALS during the year ending 31st March, 1961:—

- Roadstone, Chippings and Wet-mix.
- Concrete Aggregates.
- Coated Macadam.
- Flags, Kerbs and Setts (Natural Stone).
- Concrete Flags and Kerbs.
- Earthenware Pipes.
- Tar and Bitumen Compounds.
- Scavenging Brushes.
- Road Grids and Manhole Covers.
- Gas Coke.
- Salt.

Specification and Form of Tender may be obtained on application to Mr. E. N. CRABTREE, M.I.Mun.E., Engineer and Surveyor, Council Offices, Littleborough. No Tender will be received except in a plain sealed envelope, bearing the words "Tender for ——" followed by the subject to which it relates, but which must not bear any name or mark indicating the sender.

Tenders, sealed and endorsed as above, must be received by the undersigned not later than 12 o'clock Noon on SATURDAY, 13th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. C. CLOUGH,
Clerk of the Council.

Council Offices,
Littleborough,
23rd January, 1960.

DUNMOW RURAL DISTRICT COUNCIL.

CONTRACT NO. 17.

LITTLE HALLINGBURY SEWERAGE AND SEWAGE DISPOSAL.

TENDERS are invited, on a Fixed-price Basis in accordance with the Ministry of Housing and Local Government Circular No. 31/57, for the CONSTRUCTION OF SEWERAGE AND SEWAGE DISPOSAL WORKS at Little Hallingbury.

The Sewerage comprises, in all, the Laying of about 2,260 lin. yd. of 6in. dia. S.G.W. Sewer. Extensions are to be made to the existing Sewage Disposal Works and comprise a Pyramidical Sedimentation Tank, Biological Filter, Concrete Sludge Digestion Tank, Concrete Sludge Drying Beds, Extension to existing Sand Filter and Humus Tank, and Alteration to ancillary Finework, Site Road and Fencing.

General Conditions of Contract, Specification, Bills of Quantities and Drawings may be obtained from the Council's Consulting Engineers, MESSRS. J. D. AND D. M. WATSON, M.I.C.E., 67 Tufton Street, Westminster, S.W.1, on and after 25th January, 1960, on payment of a deposit of Ten Guineas, refundable only to contractors who submit bona-fide Tenders and return all documents and Drawings. Deposit cheques should be made payable to Dunmow Rural District Council.

The Council do not bind themselves to accept the lowest or any Tender.

Tenders must be returned in envelopes which do not bear any name or mark indicating the sender, endorsed "Tender for Sewerage Contract No. 17," and delivered at the Office of the undersigned by Noon on 4th MARCH, 1960.

A. H. BURTON,
Clerk of the Council.

Council Offices,
Dunmow, Essex.

CONTRACTS

BUCKS. COUNTY COUNCIL.

THE HIGHWAYS ACT, 1959—THE CODE OF 1892.

LATCHMOOR WAY, CHALFONT ST. PETER.

TENDERS are invited for the MAKING-UP of the ABOVE STREET.

Specification, Form of Tender and Contract and Bill of Quantities may be obtained from the County Surveyor, County Offices, Aylesbury.

Applications must be accompanied by a remittance for £2, which will be refunded on receipt of a bona-fide Tender.

Sealed Tenders must be delivered to the undersigned by MONDAY, 15th February, 1960, in the envelope provided, endorsed "Private Street Works," but not bearing any name or mark indicating the sender.

The Council do not bind themselves to accept the lowest or any Tender.

R. E. MILLARD,
Clerk of the Bucks. County Council.

County Hall,
Aylesbury,
January, 1960.

ADMINISTRATIVE COUNTY OF LEICESTER.

TENDERS are invited for the MAKING-UP of the FOLLOWING STREET:

Marsden Avenue, Queniborough, under the Highways Act, 1959, Code of 1892.

Further details and Contract Particulars obtainable from the County Engineer and Surveyor, County Offices, Grey Friars, Leicester, on deposit of £5.

Closing date: 12th FEBRUARY, 1960.

JOHN A. CHATTERTON,
Clerk of the County Council.

Grey Friars,
Leicester.

BOROUGH OF CLITHEROE.

MANOR ROAD HOUSING SITE.

FIXED-PRICE TENDERS are invited for the ERECTION OF 56 DWELLINGS on the ABOVE SITE, comprising 24 One-bedroom Maisonnettes, 14 One-bedroom Eungalows and 18 Two-bedroom Bungalows.

Plans and Specifications may be had from the Borough Engineer, Town Hall, on deposit of Two Pounds, which will be returned on receipt of a bona-fide Tender.

Separate Fixed-price Tenders are invited for the Installation of Electricity in these same dwellings, and Specification may be obtained in a similar manner.

Tenders, in a plain sealed envelope endorsed "Manor Road Housing" or "Manor Road Electricity," as the case may be, must be returned to the undersigned by not later than 12 Noon on THURSDAY, 25th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. B. SNOWDEN,
Town Clerk.

The Castle,
Clitheroe.

18th January, 1960.

CITY OF BIRMINGHAM.

TO SURFACE DRESSING CONTRACTORS.

THE PUBLIC WORKS COMMITTEE invite TENDERS, on a Fixed-price Basis, for a Measure and Value Contract for the SURFACE DRESSING, in TAR and BITUMEN, of VARIOUS ROADS in the City during 1960.

Copies of the Specification, Bills of Quantities and Forms of Tender may be obtained on payment of £2 2s. at the Office of SIR HERBERT J. MANZONI, City Engineer and Surveyor, Civic Centre, Birmingham, 1, to whom all cheques should be made payable. The deposit will be returned on receipt of a bona-fide Tender.

Tenders, enclosed in the envelopes provided for the purpose, must be sealed and delivered at the Town Clerk's Office (Room No. B.21), Council House, Birmingham, 1, not later than 12 Noon on MONDAY, 15th February, 1960, when they will be opened. Tenders received after that time will be rejected.

The Committee do not bind themselves to accept the lowest or any Tender.

T. H. PARKINSON,
Deputy Town Clerk.

Council House,
Birmingham, 1.

CITY OF BIRMINGHAM.

TO PUBLIC WORKS CONTRACTORS.

PARK STREET GARDENS DISUSED CEMETERY (Closed Burial Ground).

THE PUBLIC WORKS COMMITTEE invite TENDERS, on a Fixed-price Basis, for a Measure and Value Contract for the EXCAVATION, REMOVAL OF RUBBISH, REMAINS, DEMOLITION OF VAULTS, REINSTATEMENT OF THE SURFACE, and other incidental works on the ABOVE SITE.

Copies of the Specification, Bill of Quantities and Form of Tender may be obtained on payment of £2 2s. at the Office of SIR HERBERT J. MANZONI, City Engineer and Surveyor, Civic Centre, Birmingham, 1, to whom all cheques should be made payable. The deposit will be returned on receipt of a bona-fide Tender.

Copies of the General and Supplemental Conditions and Plans can be seen at the Highways and Survey Department, Room 339, Civic Centre, Birmingham, 1.

Tenders, enclosed in the envelopes provided for the purpose, must be sealed and delivered at the Town Clerk's Office (Room No. B.21), Council House, Birmingham, 1, not later than 12 Noon on WEDNESDAY, 10th February, 1960, when they will be opened. Tenders received after that time will be rejected.

The Committee do not bind themselves to accept the lowest or any Tender.

T. H. PARKINSON,
Deputy Town Clerk.

Council House,
Birmingham, 1.

BARNET URBAN DISTRICT COUNCIL.

ANNUAL CONTRACTS.

The Council are prepared to receive TENDERS for contract for the year commencing 1st April, 1960, for the SUPPLY of the FOLLOWING:—

- (1) Shingle, Concrete Ballast, Sand, Hoggin.
- (2) Tarmacadam, Bituminous Topping, Fine Cold Asphalt.

Particulars and Form of Tender may be obtained on application to the Council's Engineer and Surveyor at Ravenscroft House, Wood Street, Barnet, on receipt of a stamped addressed envelope.

Tenders, suitably endorsed are to be delivered to the undersigned not later than 12 Noon on the 11th FEBRUARY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

ALFRED S. MAYES,
Clerk of the Council.

Municipal Offices,
Wood Street,
Barnet, Herts.
13th January, 1960.

CONTRACTS

HERTFORDSHIRE COUNTY COUNCIL.

ROESTOCK LANE (B.556). ROESTOCK—ROAD IMPROVEMENT WORKS FROM THE BARNET BY-PASS (A.1) SOUTHWARDS TO JUNCTION WITH BULLENS GREEN LANE.

TENDERS are invited for the ABOVE CONTRACT. The works comprise Site Clearance, Tree Felling, 2,200 cu. yd. Excavation, 700 lin. yd. Footway Edging, 900 sq. yd. Tarmacadam and Fine Cold Asphalt to Footways, and 340 lin. yd. of Concrete Post and Chain Link Fencing.

Tender documents may be obtained from the County Surveyor, County Hall, Hertford, on or after 26th JANUARY, 1960, and Drawings may be inspected by appointment at his Office after the same date.

Tenders are to be returned to the CLERK OF THE COUNTY COUNCIL not later than 10 a.m. on the WEDNESDAY, 10th February, 1960.

The County Council are not bound to accept the lowest or any Tender.

County Hall,
Hertford.

BOROUGH OF REIGATE.

ONE BLOCK OF 12 FOUR-STOREY MAISONNETTES

AT ONE BLOCK OF 14 FOUR-STOREY MAISONNETTES WITH STORES UNIER, AT THE HOME ESTATE (NORTH STREET), REDHILL.

FIXED-PRICE TENDERS invited, based upon Bills of Quantities, for SUBSTRUCTURE and SITE WORKS, and Lump Sum for SUPERSTRUCTURE.

Form of Tender, Specification, Bills of Quantities and Plans obtainable from Borough Surveyor, Town Hall, Reigate, on payment of deposit of £2 2s.

Closing date for receipt of Tenders: Noon, 18th FEBRUARY, 1960.

HEER DAVIES,
Town Clerk.

Town Hall,
Reigate.

BOROUGH OF ACTON.

The TOWN COUNCIL invites TENDERS for SUPPLYING during the year beginning 1st April, 1960:—

- ARTIFICIAL STONE PAVING.
- BROOMS AND BRUSHES.
- GRANITE CHIPPINGS.

Specifications and Forms of Tender may be obtained, and the Form of Contract inspected, upon application to the Borough Engineer.

Tenders, in sealed envelopes, appropriately endorsed, must be delivered to the TOWN CLERK, Town Hall, Acton, W.3, by 12 FEBRUARY, 1960.

BOROUGH OF BRIGHOUSE.

HIGHWAYS COMMITTEE.

TENDERS are invited for the SUPPLY of the FOLLOWING:—

- (1) Mechanical Haulage.
- (2) Kerbs, Channels, Flags (Concrete and Stone).
- (3) Concrete Aggregates, Sand and Cement.
- (4) Tarmacadam.
- (5) Road Tar, Type A:
 - (a) Supply and Delivery.
 - (b) Spraying by Pressure Tanker.
- (6) Dry Aggregates.
- (7) Precoated Chippings.
- (8) Cold Asphalt.
- (9) Heating and Planing.
- (10) Premixed Waterbound Macadam.
- (11) Dense Tar Surfacing.

General Conditions, Specification and Form of Tender may be obtained from the Borough Engineer, Commercial Street, Brighouse.

Tenders must be enclosed in plain sealed envelope, endorsed "Highways Tender No. —," and must be delivered to the undersigned not later than MONDAY, the 8th February, 1960.

JOHN R. LIDDLE,
Town Clerk.

Town Hall,
Brighouse.

January 18th, 1960.

WILMSLOW URBAN DISTRICT COUNCIL.

STYAL SEWERAGE—CONTRACT NO. 8.

The above Council invites TENDERS from experienced contractors for the CONSTRUCTION, on a Fixed-price Basis, of approx. Two Miles of SEWERS up to 15in. dia., together with Manholes and appurtenant works.

Contractors desirous of tendering may obtain copies of the General Conditions, Specification, Bill of Quantities and Form of Tender from the Offices of the Consulting Engineers, MESSRS. G. B. KERSHAW AND KAUFMAN, 82 Victoria Street, Westminster, S.W.1, upon deposit of Five Guineas (cheque made payable to the Urban District Council), which will be refunded upon receipt of a bona-fide Tender not subsequently withdrawn.

Drawings may be inspected at the Offices of the Consulting Engineers, or at the Office of the Surveyor to the Council, Council Offices, Green Hall, Wilmslow.

The any day during ordinary office hours. Tenders, endorsed "Styal Sewerage—Contract No. 8," in plain sealed envelopes not bearing any name or mark indicating the sender, must be delivered to the undersigned not later than Noon on WEDNESDAY, the 17th February, 1960.

The Council does not bind itself to accept the lowest or any Tender.

J. HERWALD MORRIS,
Clerk of the Council.

Council Offices,
Green Hall,
Wilmslow, Ches.
20th January, 1960.

ORPINGTON URBAN DISTRICT COUNCIL.

STREET LIGHTING—ERECTION OF COLUMNS.

TENDERS are invited for the ERECTION OF GROUP "B" CONCRETE COLUMNS and Installation of Associated Equipment within the District, in varying quantities. The Columns and Equipment will be supplied by the Council.

Form of Tender, Specification and Schedule of Rates may be obtained from the Engineer and Surveyor, Civic Offices, The Walnuts, High Street, Orpington, on payment of a deposit of £2, which will be returned on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders to be submitted in the plain sealed envelope provided, endorsed "Street Lighting," which must not bear any name or mark indicating the sender, and must be delivered to the undersigned by not later than 12 Noon on TUESDAY, 23rd February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

STEPHEN KING,
Clerk of the Council.

Council Offices,
Crofton Pound Hill,
Orpington, Kent.
28th January, 1960.

CONTRACTS

BOROUGH OF KING'S LYNN.

ANNUAL TENDERS, 1960-61.

The CORPORATION invites TENDERS for the SUPPLY and DELIVERY of the UNDERMENTIONED GOODS for 12 months ending 31st March, 1961:—

- Bituminous Carpeting.
- Cement.
- Cold Asphalt.
- Concrete Paving Slabs.
- Concrete Kerbing.
- Disinfectants.
- Electric Lamps.
- Electrical Sundries.
- Gully Gratings, Manhole Covers, etc.
- Overall.
- Plastic White Lines.
- Rebristling Lacr Sweeper Brushes.
- Rubber Boots.
- Salt for Snow Clearing.
- Sand, Gravel and Hozgin.
- Sanitary Dustbins.
- Tarred Granite and Slag.
- Toilet Paper.

Particulars and Form of Tender may be obtained from the Borough Engineer (Mr. H. G. RIDLER, M.I.Mun.E.), Clifton House, 17 Queen Street, King's Lynn.

Sealed Tenders, in the envelope provided, should be delivered to the undersigned not later than 17th FEBRUARY, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

E. W. GOCHER,

Town Clerk.

Town Hall,
King's Lynn.

COUNTY BOROUGH OF BARNSLEY.

BOROUGH ENGINEER AND
SURVEYOR'S DEPARTMENT.

TENDERS FOR MATERIALS, 1960-61.

TENDERS are invited for the SUPPLY of the FOLLOWING MATERIALS for the 12 months ending 31st March, 1961:—

- (1) Tarred Slag.
- (2) Bitumen Macadam and Fine Cold Asphalt.
- (3) Gravel and Sand.
- (4) Concrete Kerbs, Edgings and Flags.
- (5) Concrete Pipes, Gully Pots and Manholes.
- (6) Salt Glazed Earthenware Pipes.
- (7) Cement.
- (8) Cast-Iron Manhole Covers and Gully Gratings.
- (9) Tar.
- (10) Bitumen.
- (11) Cold Emulsions.
- (12) Concrete Public Lighting Columns.
- (13) Electric Lamps for Public Lighting Purposes (Tungsten Filament).
- (14) Electric Lamps for Public Lighting Purposes (Mercury Vapour and Sodium).

Copies of the Specifications and Forms of Tender may be obtained on application to the Borough Engineer and Surveyor, Town Hall, Barnsley.

Sealed Tenders, in envelopes provided, must be delivered to the undersigned not later than TUESDAY, 16th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

A. E. GILLFILLAN,

Town Clerk.

Town Hall,
Barnsley,
January, 1960.

CITY OF LIVERPOOL.

TENDERS invited for CONSTRUCTION OF BRIDGE to support Footway, junction of Westminster Road and Melrose Road, and REPOSITIONING BOUNDARY WALL, Brewster Street, Liverpool, 4.

Documents from City Engineer and Surveyor, Municipal Buildings, Liverpool, 2.

Tenders returnable by 13th FEBRUARY, 1960.

THOMAS ALKER,

Town Clerk.

(J.6003A)

CITY OF LIVERPOOL.

TENDERS invited for SUPPLY AND ERECTION OF CONCRETE POST AND WOOD PALE FENCING at SPIKE PLAYING FLD., Hale Road, Liverpool, 24.

Documents from City Engineer and Surveyor, Municipal Buildings, Liverpool, 2.

Tenders returnable by 4th FEBRUARY, 1960.

THOMAS ALKER,

Town Clerk.

(J.6003B)

NORTH DEVON WATER BOARD.

HIGHER MUNTNY WATER TOWER.

TENDERS are invited from competent contractors having experience of similar work, for the CONSTRUCTION of a REINFORCED CONCRETE WATER TOWER of 60,000 gallons capacity, together with all ancillary works, near Churchstanton, Somerset.

Contractors wishing to submit a Tender on a Fixed-price Basis (i.e., without the inclusion of cost variation clauses for labour and materials) should apply to the Board's Consulting Engineers, MESSRS. HARVEY, MCGILL AND HAYES, of 8 Richmond Road, St. David's, Exeter, from whom copies of the Specification, Bill of Quantities and Form of Tender may be obtained on or after WEDNESDAY, 10th February, on payment of a deposit of £5 5s, by cheque made payable to the North Devon Water Board.

The deposit will be refunded to contractors who submit bona-fide Tenders not subsequently withdrawn, accompanied by priced Bill of Quantities, and after the return of all documents and Drawings.

Sealed Tenders, endorsed "Higher Muntny Water Tower," but bearing no name or mark identifying the sender, are to be delivered to the undersigned not later than Noon on MONDAY, 29th February, 1960.

The Board do not bind themselves to accept the lowest or any Tender they may receive.

R. T. SHEARS,

Clerk to the Board.

4 Barnfield Crescent,
Exeter.SHEFFIELD CORPORATION
WATERWORKS.

YORKSHIRE DERWENT SCHEME.

TENDERS FOR LOW LIFT PUMPS.

TENDERS are invited from pump manufacturers for the SUPPLY and INSTALLATION of the WATER PUMPS and MOTORS for the Low Lift Pumping Station for the Yorkshire Derwent Scheme of Supply. The Station will be capable of raising over 15 m.g.d. through heads of between 25ft. and 35ft.

Persons wishing to tender should apply for the necessary documents, which will include instructions regarding the method and date of submission, to the GENERAL MANAGER AND ENGINEER, Water Department, Town Hall, Sheffield, 1.

CONTRACTS

COUNTY BOROUGH OF BIRKENHEAD.

PASSENGER TRANSPORT DEPARTMENT.

TENDERS are invited for the SUPPLY of 15 NEW DOUBLE-DECKER OMNIBUS CHASSIS and 15 NEW DOUBLE-DECKER OMNIBUS BODIES.

Details and Form of Tender from the GENERAL MANAGER, Transport Dept., Laird Street, Birkenhead.

Closing date for Tenders: 13th FEBRUARY, 1960.

BOROUGH OF THETFORD.

STREET LIGHTING.

TENDERS are invited for the SUPPLY and/or INSTALLATION of 21 CONCRETE STREET LIGHTING COLUMNS (25ft. mounting height), with Sodium Discharge Lamps, Lanterns and all auxiliary equipment, to Group "A" standard for Street Lighting on the Trunk Road A.11 at Thetford. Separate Tenders are also invited for the Supply and Laying of the necessary Street Lighting Cable.

The Specification, Bill of Quantities and Forms of Tender may be obtained from the Borough Engineer, Municipal Offices, Thetford, Norfolk, on payment of Two Guineas, which will be refunded upon receipt of a bona-fide Tender and return of all documents.

Plans and General Conditions of Contract may be inspected at the Municipal Offices, Thetford.

Tenders, in plain sealed envelopes endorsed "Street Lighting Trunk Road A.11," must be delivered to the undersigned not later than Noon on MONDAY, 15th February, 1960.

W. ELLIS CLARKE,

Town Clerk.

Municipal Offices,
Thetford, Norfolk,
15th January, 1960.

CITY OF SHEFFIELD.

CONTRACTS FOR SUPPLIES.

TENDERS are invited for the UNDERMENTIONED SUPPLIES to the Several Departments of the Sheffield Corporation from 1st March, 1960 viz.:

- Floor Polish.
- Floor Sweeping Compound.
- Miscellaneous Cleaning Materials.
- Turpentine Substitute; and
- Confectionery (comprising Baked Sweets and Chocolate).

Persons wishing to tender may obtain the necessary forms on application to the Town Clerk, Town Hall, Sheffield.

Tenders must be delivered to the Town Clerk, Town Hall, Sheffield, not later than 10 a.m. on FRIDAY, 5th February, 1960.

Tenders received after the date and time specified will not be considered.

The Council do not undertake to accept the lowest

any Tender and reserve the right to accept a Tender

in its entirety or in respect of certain items or portions

of items comprised therein.

JOHN HEYS,

Town Clerk.

Town Hall,
Sheffield,
21st January, 1960.WYMONDHAM URBAN DISTRICT
COUNCIL.EXTENSION AND RECONSTRUCTION OF
SEWAGE DISPOSAL WORKS.

TENDERS are invited from experienced public works contractors for the EXTENSION AND RECONSTRUCTION of the SEWAGE DISPOSAL WORKS at WYMONDHAM. The work comprises the Construction of the Upward Flow Sedimentation Tanks, Four 66ft. dia. Filter Beds, Two Humus Tanks, together with Storm Tanks, Sludge Drying Beds, and other contingent works, including the Reconstruction of part of the Existing Sewage Works.

Application for tendering documents should be made to the Council's Consulting Engineers, MESSRS. W. HUBERT, BATEMAN AND PARTNERS, Halifax House, Bank Plain, Norwich, Norfolk, before SATURDAY, 30th January, 1960, and should be accompanied by a deposit cheque for Five Guineas, payable to the Council, which will be returned on receipt of a bona-fide Tender not subsequently withdrawn. The Drawings may be inspected, by appointment, at the Norwich Office of the Consulting Engineers.

Sealed Tenders on the form provided in the Bill of Quantities, and accompanied by the Quantities priced in ink, must be delivered to the undersigned, in a plain sealed envelope endorsed "Sewage Disposal Works," not later than Noon on TUESDAY, 1st March, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

T. J. TURNER,

Clerk of the Council.

Council Offices,
Wymondham, Norfolk,
15th January, 1960.

WORSLEY URBAN DISTRICT COUNCIL.

TENDERS FOR PRIVATE STREET WORKS.

TENDERS are invited for the MAKING-UP of DUCHY AVENUE, Walsden, approx. length 140 lin. yd. Tender documents may be obtained from the Engineer and Surveyor, Town Hall, Walsden, upon payment of a deposit of £2 2s., which will be refunded after receipt of a bona-fide Tender. Plans, etc., of the proposed works may be inspected at the Office of the Engineer and Surveyor.

Tenders, in plain sealed envelopes endorsed "Private Street Works—Duchy Avenue," should be delivered to the undersigned not later than the 6th FEBRUARY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

ROBERT E. HUBAND,

Clerk and Solicitor.

Town Hall,
Walsden,
Manchester.

CLARO WATER BOARD.

SOFTENING PLANT—BARDSEY AND
STOCKELD PUMPING STATIONS.

TENDERS are invited for the SUPPLY and INSTALLATION of TWO FULLY AUTOMATIC BASE EXCHANGE WATER SOFTENING PLANTS each capable of giving a normal flow rate of 12,000 gallons per hour of blended water. At Bardsey Pumping Station, FILTERS for the Removal of Manganese and Iron are also required.

Further details may be obtained from the Engineer to the Board.

The completed Tenders must be returned in plain sealed envelopes endorsed "Bardsey and Stockeld Softening Plant," to the Engineer to the Board, Claro Water Board, Municipal Offices, Harrogate, and must be received not later than 12 Noon on MONDAY, the 29th February, 1960.

JAMES B. POOLEY,

Engineer to the Board.

Claro Water Board,
Municipal Offices,
Harrogate, Yorks.

CONTRACTS

COUNTY OF DORSET.

AMBULANCE SERVICE VEHICLES.

The Dorset County Council invite TENDERS for the SUPPLY of the FOLLOWING:

- (a) Two Ambulances with bodies of complete glass fibre reinforced plastic construction mounted on Austin L22 petrol chassis.
- (b) One Ambulance with dual-purpose body mounted on a Bedford CAL petrol chassis; and
- (c) One Ambulance with dual-purpose body mounted on a Ford Thames 15cwt. chassis.

Forms of Tender, Conditions of Contract, and Specification requirements may be obtained from the County Medical Officer, County Hall, Dorchester.

Sealed Tenders, endorsed "Tender for Ambulance Service Vehicles," must be received by me by the 12th FEBRUARY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

C. P. BRUTTON,

Clerk of the County Council.

County Hall,
Dorchester,
15th January, 1960.

BOROUGH OF CHELMSFORD.

KINGS HEAD MEADOW CAR PARK
(SECOND STAGE).

TENDERS are invited for the SUPPLY of approx. 500 cu. yd. of HARDWARE for the Construction of a Paved Area at the ABOVE CAR PARK.

Specification and Form of Tender may be obtained from the Office of the Borough Engineer, Municipal Offices, Coval Lane, Chelmsford.

Tenders must be received by the undersigned not later than 12 Noon on WEDNESDAY, 17th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

B. A. FRANCIS,

Town Clerk.

Municipal Offices,
Coval Lane,
Chelmsford.

BOROUGH OF GRANTHAM.

TENDERS are invited for the HEATING and PLANING of approx. 600 sq. yd. of CARRIAGEWAY and the SUPPLYING and LAYING approx. 2,750 sq. yd. of HOT ROLLED ASPHALT SURFACING.

Conditions of Contract, Specification, and Form of Tender may be obtained from the Borough Engineer, Guildhall, Grantham.

Tenders, in plain sealed envelopes endorsed "Tender for Asphalt Surfacing," must be delivered to me by 8th FEBRUARY.

JOHN F. GUILLE,

Town Clerk.

Guildhall,
Grantham.BEESTON AND STAPLEFORD URBAN
DISTRICT COUNCIL.

ANNUAL TENDERS.

TENDERS are invited for ANNUAL SUPPLY of PRECAST CONCRETE KERB, CHANNEL and PAVING SLABS, TARMACADAM (Granite or Slag Aggregate), and PETROL and OIL.

Forms of Tender obtainable from the Engineer and Surveyor, Town Hall, Beeston, Nottingham, on deposit of £2.

H. D. JEFFRIES,

Clerk of the Council.

CATERHAM AND WARLINGHAM
URBAN DISTRICT COUNCIL.CONSTRUCTION OF A SURFACE WATER SEWER
IN WHYTELEAF RECREATION GROUND.

TENDERS are invited for the CONSTRUCTION of a SURFACE WATER SEWER in Whyteleaf Recreation Ground, comprising the Laying of approx. 240 lin. yd. of 18in. Concrete Tubes and 240 lin. yd. of 21in. Concrete Tubes, together with the Construction of Nine Manholes and minor ancillary works.

Forms of Tender, Bills of Quantities and Specification may be obtained from, and the Drawings inspected at, the Office of the Engineer and Surveyor, Council Offices, Caterham. Applications should be accompanied by a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender.

Tenders, enclosed in the endorsed envelope provided, are to be delivered to the undersigned not later than 4 p.m. on the 26th FEBRUARY, 1960.

B. J. SMERDON,

Clerk of the Council.

Council Offices,
Caterham, Surrey.

ROCHFORD RURAL DISTRICT.

HULLBRIDGE SEWERAGE—SECOND
DEVELOPMENT.

FERRY ROAD AREA.

TENDERS are invited from experienced contractors for the CONSTRUCTION of about 600yd. of 6in. and 9in. dia. STONEWARE PIPE SEWERS, with Brick Manholes, and a similar length of 6in. dia. RISING MAIN in Asbestos-cement PRESSURE PIPE, also for a SEWERAGE PUMPING STATION, with Reinforced Concrete Storage Sump and Pump Well, and Brick Superstructure.

Copies of relevant Drawings and of the Specification, Bills of Quantities and Form of Tender may be obtained from the Council's Engineer and Surveyor on payment of a deposit of Three Guineas, which will be refunded on receipt of a bona-fide Tender and the return of all documents.

Further Drawings may be inspected by appointment at the Council Offices.

Tenders, in plain sealed envelopes endorsed "Hullbridge Sewerage—Second Development, Ferry Road Area," must be delivered to the undersigned not later than 12 Noon on THURSDAY, 25th February, 1960.

The Council do not bind itself to accept the lowest or any Tender.

S. C. HARRIS,

Clerk of the Council.

Council Offices,
Rochford, Essex,
15th January, 1960.BATH FIRE BRIGADE AND AMBULANCE
SERVICE.

TENDERS are invited for the SUPPLY of UNIFORM CLOTHING to standard Fire Service Uniform Specification, for the Joint Fire Brigade and Ambulance Service.

Tender Forms and details of Quantities and Items required may be obtained from the Chief Fire Officer, Central Fire Station, Cleveland Bridge, Bath.

Completed Tender Forms to be returned to the undersigned not later than the 20th FEBRUARY, 1960.

JARED E. DIXON,

Town Clerk.

Guildhall,
Bath.

CONTRACTS

COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE.

TENDERS are invited for the ALTERATIONS and EXTENSIONS to the COUNTY POLICE STATION, Doncaster Road, Dalton, near Rotherham. Applications to tender must be addressed to the Divisional Architect, Planet Road, Adwick-le-Street, near Doncaster, and received not later than FRIDAY, 12th February, 1960.

The Contract will be in accordance with the R.I.B.A. Form of Agreement.

Sealed Tenders must be addressed to me, the undersigned, and received at Room 46, County Hall, Wakefield, not later than 12 Noon on FRIDAY, 4th March, 1960.

COUNTY COUNCIL OF DURHAM.

TENDERS invited for UNDERMENTIONED SERVICES at Dinsdale Park, Elmetere Hall, Walworth Castle, Windstone Hall and Redworth Hall Residential Schools, and Birtley Leaflet House Hostel:
Swill Collection.
Footwear Repairs.
Window Cleaners.
Particulars from undersigned.

G. H. METCALFE,
Director of Education.

Shire Hall,
Durham,
18th January, 1960.

METROPOLITAN BOROUGH OF GREENWICH.

APPLICATIONS are invited from those willing to TENDER for either or both of the FOLLOWING SCHEMES:

- Barney Street, Gloucester Circus Site—The Erection of 54 Flats and Maisonnettes in Two 5-storey blocks. One block will incorporate on the ground floor a small Maternity and Child Welfare Clinic.
- Trafalgar Road Site—The Erection of 16 Flats in One 4-storey block.

Applicants should state whether they wish to tender for Scheme (a) or (b), or both.
Selected applicants will be notified by post and will be supplied with Bills of Quantities and other documents required to enable them to tender.

Tenders will be required to sign, or to refuse to sign, a certificate declaring that they are not parties to any scheme or arrangement with other tenderers in respect of the amount of, or the adjustment of, their Tender.

Applications, addressed to the undersigned, receivable by First Post, TUESDAY, 2nd February, 1960, must include particulars of recent works executed by applicants.

G. C. TURK,
Town Clerk.

The Town Hall,
Greenwich High Road,
Greenwich, S.E.10.

BOROUGH OF MAIDSTONE.

RAIGERSFELD FENCING—MOTE PARK.

TENDERS are invited for the PROVISION and ERECTION of approx. 260 lin. yd. of CHAIN LINK FENCING at Mote Park, Maidstone.

Specifications and Bills of Quantities may be obtained from the Office of the Borough Surveyor, Palace Avenue, Maidstone.

Tenders, in plain sealed envelopes endorsed "Raigersfeld Fencing," must reach the undersigned not later than 10 a.m. on MONDAY, 8th February, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

T. SCHOLES,
Town Clerk.

13 Tonbridge Road,
Maidstone.

BOROUGH OF TAUNTON.

TENDERS are invited, by 8th FEBRUARY, 1960, for HOT ROLLED ASPHALT RESURFACING at CORPORATION STREET—approx. 2,000 sq. yd.—and ancillary works.

Specification, Bill of Quantities and Form of Tender obtainable from Borough Engineer, St. Paul's House, Taunton.

K. A. HORNE,
Town Clerk.

15th January, 1960.

BOROUGH OF SALE.

PRIVATE STREET WORKS.

TENDERS are invited for the MAKING-UP of the FOLLOWING STREETS:

- Whitehall Road—approx. 550 lin. yd.
- Alcester Road—approx. 145 lin. yd.
- Greystoke Avenue—approx. 55 lin. yd.
- Mowbray Avenue—approx. 55 lin. yd.

Specification, Bills of Quantities and Forms of Tender obtainable, on payment of a £2 2s. deposit (for all four streets), at the Borough Engineer's Department, Town Hall, Sale, where Plans, Sections and General Conditions of Contract may be inspected.

No Tender will be considered unless forwarded in the special envelope provided, but devoid of any name or mark indicating the sender, so as to reach the undersigned not later than 10 a.m. on MONDAY, 15th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

BERTRAM FINCH,
Town Clerk.

Town Hall,
Sale.

BOROUGH OF SOUTHGATE.

- SUPPLY OF GRANITE CHIPPINGS FOR SURFACE PAVING.
- CONTRACT SURFACE DRESSING.

The Southgate Borough Council invite TENDERS for the FOLLOWING:

- The Supply of 250 tons 3/4 in. Granite Chippings for delivery during the month of April, 1960.
- For Spraying Roads with Tar plus 10 per cent. Bitumen, contract work to be carried out during the month of May, 1960.

The approx. area will be 30,000 sq. yd.
Forms of Tender may be obtained from MR. J. T. W. PEAT, F.R.I.B.A., Borough Engineer and Surveyor, Town Hall, Palmers Green, N.13.

No Tender will be accepted unless envelope bears the gummed label marked "Granite Chippings" or "Contract Surface Dressing," provided, and which must not have any name or mark indicating the sender.
The Council reserve the right to apportion any Tender and do not bind themselves to accept the lowest or any Tender.

Tenders must be delivered to the Town Clerk not later than 9 a.m. on MONDAY, 8th February, 1960.
No Tender will be considered unless the above conditions are strictly adhered to.

GORDON H. TAYLOR,
Town Clerk.

Town Hall,
Palmers Green, N.13,
January, 1960.

CONTRACTS

BOROUGH OF WREXHAM.

SUPPLY AND DELIVERY OF STREET LIGHTING FITTINGS.

TENDERS are invited for the SUPPLY and DELIVERY to the Corporation Depot of the FOLLOWING STREET LIGHTING FITTINGS:

- 100 Cast-iron Columns and Brackets (15ft. mounting height).
- 100 Totally Enclosed Lanterns.
- 100 Chokes and Capacitors for 80-W VM Lighting.
- 100 80-W Mercury Vapour/Fluorescent Lamps.

Forms of Tender for any or all of the above can be obtained from the Borough Engineer and Surveyor, 31 Chester Street, Wrexham.

Completed Tenders to be returned in the appropriate envelope provided, to the undersigned not later than 12 Noon, THURSDAY, 4th February, 1960.

PHILIP J. WALTERS,
Town Clerk.

Guildhall,
Wrexham,
January, 1960.

BOROUGH OF ROWLEY REGIS.

SUPPLY OF MATERIALS—1ST APRIL, 1960, TO 31ST MARCH, 1961.

TENDERS are invited for the SUPPLY of the FOLLOWING MATERIALS—
Road Materials, Paraffin, Bricks, etc., Stoneware, Cast Ironwork, etc., Sand, Lime, Cement, Salt and Ashes, Fuel, Petrol, Oils, Tools and Clothing, Concrete Goods, Cleaning Materials, Painters', Plumbers', Electricians' and Carpenters' Requisites.

Forms of Tender, showing quantities, Specifications and Conditions of Contract may be obtained from the undersigned, to whom Tenders should be delivered, in the envelope provided, not later than 12 Noon on FRIDAY, the 12th February, 1960.

JOHN HILTON,
Town Clerk.

Municipal Buildings,
Old Hill, Staffs.,
23rd January, 1960.

CITY OF STOKE - ON - TRENT.

- BERRY HILL NEIGHBOURHOOD UNIT—CONTRACT NO. 1
- BENTLEE FARM HOUSING ESTATE, EUCKNALL—CONTRACT NO. 9.

COMPLETION OF STREET WORKS. TO CONTRACTORS.

The CORPORATION invite TENDERS for the COMPLETION OF STREET WORKS on the ABOVE ESTATES, which include the FOLLOWING:

- 10,600 sq. yd. 3 in. Tarred Macadam Surfacing.
- 6,300 sq. yd. 2 in. Concrete Flag Paving.
- 1,800 lin. yd. 5 in. x 10 in. Precast Concrete Kerbing.
- 2,900 lin. 2 in. Edging Kerb.

Together with other incidental works.
Drawings and Conditions of Contract may be seen, and Specifications and Bills of Quantities obtained, upon application to the City Engineer and Surveyor, Town Hall, Stoke-on-Trent, on payment of a deposit of £2 in respect of (a) and £1 in respect of (b). These deposits will be returned on receipt of bona-fide Tenders.

Tenders and priced Bills of Quantities must be delivered to the Town Clerk, Town Hall, Stoke-on-Trent, in the separate envelopes provided, not later than 12 Noon on WEDNESDAY, the 3rd February, 1960.

HARRY TAYLOR,
Town Clerk.

CITY OF SALFORD.

ELLOR STREET CLEARANCE AREA NO. 3.

TENDERS are invited for the DEMOLITION of 233 PROPERTIES in the ABOVE AREA.

Plans may be seen at, and Specification and Form of Tender obtained from, the City Engineer's Office, Town Hall, Salford.

Closing date for acceptance of Tenders is WEDNESDAY, 3rd February, 1960.

R. RIB. LESDALE THORNTON,
Town Clerk.

CITY AND COUNTY OF NORWICH.

ANNUAL CONTRACTS, 1960-61.

TENDERS are invited for the UNDERMENTIONED MATERIALS and SERVICES for the year commencing 1st April, 1960:

- Bitumen Granite.
- Disinfectant.
- Precast Concrete Kerbs, Flags and Edging.
- Portland Cement.
- Sand, Shingle, etc.
- Salt Glazed Ware Pipes, Fittings, Gullies, etc.
- Manhole Covers and Frames.
- Scavenging Brooms.
- Hot Rolled Asphalt (including Laying).
- Ironmongery.
- Hire of Motor Cars and Lorries.
- Hard Bar Soap.
- Electric Lamps.
- Washing Soda.
- Metan Polish.
- Torch Batteries.
- Toilet Rolls.
- Floor Polish.
- Floor Cloths.
- Dusters.
- Scouring Powder.
- Motor Spirit, Boiler Fuel Oil, etc.
- Cold Asphalt (Mixing Plant to be within 25-mile radius of Norwich).

Forms of Tender, Specifications, etc., may be obtained from the CITY ENGINEER, City Hall, Norwich. NOR. OLA, to whom Tenders, on the form supplied, and sealed in the official envelope, are to be delivered by 10 a.m., 13th FEBRUARY, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

ST. ALBANS RURAL DISTRICT COUNCIL.

WATFORD RURAL DISTRICT COUNCIL.

STREET LIGHTING—NORTH ORBITAL ROAD.

A.405.

The above-mentioned Councils invite TENDERS for CONTIGUOUS STREET LIGHTING SCHEMES on the North Orbital Road, A.405 (Trunk Road). Contractors wishing to tender for the Installations should apply to the Engineers at the addresses below for further details within seven days from the publication of this advertisement.

ERIC N. WHEELER,
Clerk of the St. Albans R.D.C.
43 Upper Lattimore Road,
St. Albans, Herts.

S. A. NICHOLSON,
Clerk of the Watford R.D.C.
Wynward House,
Langley Road,
Watford, Herts.

CONTRACTS

COUNTY BOROUGH OF DEWSBURY.

MAIN DRAINAGE—OLD BANK ROAD.

TENDERS are invited for the CONSTRUCTION of approx. 309 lin. yd. of 9 in. dia. and 337 lin. yd. of 12 in. dia. SURFACE WATER SEWER in connection with the ABOVE.

Plans and Conditions of Contract may be seen at, and Specification, Bills of Quantities and Form of Tender obtained from, the Office of the Borough Engineer and Surveyor, Municipal Buildings, Halifax Road, Dewsbury, on payment of a deposit of Two Guinea, which will be returned on receipt of a bona-fide Tender.

Tenders, in plain sealed envelopes endorsed "Tender for Main Drainage—Old Bank Road," must be delivered to me by Noon on THURSDAY, 11th February, 1960.

A. NORMAN JAMES,
Town Clerk.

Town Hall,
Dewsbury,
19th January, 1960.

BOROUGH OF ASHTON-UNDER-LYNE.

ANNUAL TENDERS.

TENDERS are invited for the SUPPLY and DELIVERY of the UNDERMENTIONED MATERIALS for the 12 months commencing 1st April, 1960:

- Gritstone Kerbs.
- Precast Concrete Kerbs and Flags.
- Fine Cold Asphalt.
- Bitumen Macadam.
- Building Sand and Concrete Aggregates.
- Salt Glazed Ware Pipes and Gullies.
- Castings.
- Aluminium Street Nameplates.
- Electric Lamps.

Conditions of Contract, Specifications and Forms of Tender may be obtained from the Borough Surveyor, Municipal Offices, Ashton-under-Lyne, and Tenders should be returned to the undersigned, in the official envelope provided, not later than 12 Noon, WEDNESDAY, 10th February, 1960.

The Council reserve the right to divide any contract between two or more contractors, and do not bind themselves to accept the lowest or any Tender.

G. A. MALONE,
Town Clerk.

Town Hall,
Ashton-under-Lyne,
15th January, 1960.

TURTON URBAN DISTRICT COUNCIL.

ANNUAL CONTRACTS, 1960-61.

TENDERS are invited for the SUPPLY of the UNDERMENTIONED MATERIALS for the year ending 31st March, 1961:

- (1) Crushed Granite and Limestone.
- (2) Crushed Gritstone and Quarry Sand.
- (3) Washed Gravel and Sand.
- (4) Tarmacadam and Bitumen Macadam.
- (5) Precast Concrete Kerbs, Channels and Flags.
- (6) Retined Tar, Bituminous Compounds and Bitumen Road Emulsion.
- (8) Crushed Salt.
- (9) Stoneware Pipes.
- (10) Coal and Coke.
- (11) Cast-Iron Gully Grates and Manhole Covers.
- (12) Bricks.
- (13) Petroleum Products (no Tender Form supplied).

Particulars and Forms of Tender may be obtained upon application to Mr. REGINALD DART, M.I.Mun.E., Dip.I.P., A.M.T.P.I., Engineer and Surveyor, Council Offices, Bromley Cross, near Bolton. Sealed Tenders, endorsed "Tender for Annual Contract No. —" as the case may be, but bearing no name or mark indicating the sender, must be delivered to the undersigned not later than 24th FEBRUARY, 1960.

The Council reserves the right to divide any contract, and does not bind itself to accept the lowest or any Tender.

H. LEWIS,
Clerk of the Council.

Council Offices,
Bromley Cross,
Near Bolton,
18th January, 1960.

FARNHAM URBAN DISTRICT COUNCIL.

ANNUAL TENDERS, 1960-61.

The Council invite TENDERS for the SUPPLY of the FOLLOWING MATERIALS or WORK during the financial year ending 31st March, 1961:

- (1) Tarmacadam, Bituminous Macadam and Fine Asphalt.
- (2) Heating and Planning Road Surface.
- (3) Surface Dressing of Roads and Footpaths.
- (4) Plastic White Lines, etc.
- (5) Resurfacing Works by Machine.
- (6) Concrete Pipes, etc.
- (7) Concrete Kerbs and Slabs.

Forms of Tender and particulars may be obtained from the Engineer and Surveyor, Mr. GEOFFREY POOLE, A.M.I.C.E., Council Offices Annexe, South Street, Farnham, Surrey.

Tenders must be enclosed in the official envelopes provided for the purpose, endorsed, sealed and delivered to the undersigned not later than MONDAY, the 15th February, 1960.

H. W. UNDERDOWN,
Acting Clerk of the Council.

Council Offices,
South Street,
Farnham, Surrey.

SITTINGBOURNE AND MILTON URBAN DISTRICT COUNCIL.

ANNUAL TENDERS.

The Council invites TENDERS for the SUPPLY and DELIVERY of the FOLLOWING MATERIALS for the year ending 31st March, 1961:

- Portland Cement.
- All-in Aggregate.
- Coarse Aggregate.
- Fine Aggregate.
- Tarmacadam.
- Bitumen Macadam.
- Fine Cold Asphalt.
- Precast Concrete Kerb and Channel, Paving Slabs.
- Dustbins.
- Salt.
- Cast-Iron Pipes and Galvanised Steel Tubes.
- Petrol.
- Diesel Fuel.

Forms of Tender and Conditions of Contract may be obtained from the Engineer and Surveyor, "Lydbrook," 89 London Road, Sittingbourne.

Tenders, in plain sealed envelopes, endorsed "Annual Tenders," must be received by the undersigned not later than 10 a.m. on TUESDAY, 16th February, 1960.

The Council does not bind itself to accept the lowest or any Tender.

D. ALLEN,
Clerk of the Council.

Council Offices,
76 High Street,
Sittingbourne,
19th January, 1960.

CONTRACTS

ISLE OF ELY COUNTY COUNCIL.

HIGHWAYS AND BRIDGES DEPARTMENT.

TRUNK ROAD A.10.
LITTLEPORT—SURFACE WATER DRAINAGE
SCHEME—CONTRACT I.

TENDERS are invited for the CONSTRUCTION of approx. 900yd. of SURFACE WATER SEWER in HIGH STREET and ELY ROAD, Littleport, ranging from 6in. to 12in. dia., including Precast Concrete Manholes, Road Gullies and Connections.

Applications for the Conditions of Contract, Specification, Bill of Quantities and Form of Tender, together with Drawings, must be made to the County Surveyor, County Hall, March, Cambs.

Tenders are to be returned by Noon on 8th FEBRUARY, 1960.

The lowest or any Tender will not necessarily be accepted.

R. F. G. THURLOW,

Clerk of the County Council.

County Hall,
March, Cambs.

COUNTY BOROUGH OF BARROW-IN-FURNESS.

HOUSING COMMITTEE.

NORTH WALNEY HOUSING ESTATE—
3RD DEVELOPMENT, 1ST SECTION—
BULK EXCAVATION AND FILLING FOR ROADS
AND OPEN SPACES.

TENDERS are invited for the BULK EXCAVATION and FILLING of approx. 7,500 cu. yd. for ROADS and OPEN SPACES on the ABOVE-NAMED SITE.

The work consists of Hedge Removal, Soil Stripping over line of New Roads and Open Spaces, and Excavation to Formation Level on Roads to be constructed for Housing Development, and incidental works. Maximum depth of excavation will approximately be 8ft. over an area of approximately three acres of grassland.

Forms of Tender, Specification, and Bills of Quantities may be obtained on application at the Office of the Borough Engineer and Surveyor, MR. J. N. FLITCROFT, A.M.I.C.E., where also Plans of the said works can be inspected.

Sealed Tenders, endorsed "North Walney Housing Estate, 3rd Development, 1st Section: Bulk Excavation, etc.," are to be delivered at the Office of the undersigned not later than 12 Noon on MONDAY, 8th February, 1960.

The Corporation does not undertake to accept the lowest or any Tender.

LAWRENCE ALLEN,

Town Clerk.

Town Hall,
Barrow-in-Furness.

BOROUGH OF RUGBY.

TENDERS FOR HAULAGE AND SUPPLIES.

The CORPORATION invite TENDERS for HAULAGE and for the SUPPLY of the FOLLOWING GOODS and MATERIALS for the year ending 31st March 1961, viz.:—

Kerbs and Slabs, Granite Chippings, Gravel, Fitching, Wet-mix, Coated Macadam, Tar, Bituminous Emulsion, Paints, Dustbins and Overall Clothing.

Forms of Tender may be obtained on application at the Borough Surveyor's Office, Burford House, Church Walk, Rugby, or on receipt of a stamped addressed foolscap envelope. Tenders, in the envelopes provided, and bearing the words "Tender for —," but with no name or mark to indicate the sender, must be delivered to the undersigned not later than SATURDAY, 13th February, 1960.

T. L. DUFFY,

Town Clerk.

MABLETHORPE AND SUTTON URBAN DISTRICT COUNCIL.

STREET WORKS—VICTORIA ESTATE,
SUTTON-ON-SEA.

TENDERS are invited for the CONSTRUCTION of approx. 90yd. of NEW TARMAC ROAD, 19ft. overall width, with Footpath and Surface Water Drainage; the REHABILITATION of EXISTING CONCRETE HIGHWAY (approx. 130yd. in length), including the Re-laying of Footpath, Repair of Existing Surface Water Drainage and the Filling-in of Dyke; and EXTENSION of an EXISTING CONCRETE ROAD, involving the Laying of approx. 85 sq. yd. Concrete.

Plans, Sections, etc., may be inspected at the Council Offices, Mablethorpe, where Bills of Quantities may be obtained on payment of a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender.

Sealed Tenders, in plain envelopes endorsed "Victoria Estate Roads," must be received by the undersigned not later than Noon on the 13th FEBRUARY, 1960.

The Council does not bind itself to accept the lowest or any Tender.

R. VINCENT LEWIS,

Clerk of the Council.

Council Offices,
Mablethorpe.

CHISLEHURST AND SIDCUP URBAN DISTRICT COUNCIL.

SURFACE WATER SEWER—ELMSTEAD LANE,
CHISLEHURST.

TENDERS are invited for the CONSTRUCTION of 200 lin. yd. of 12in. dia. SEWER, together with Manholes, and ancillary works.

Plans and Conditions of Contract may be inspected at the Office of the Engineer and Surveyor, Manor House, Sidcup, from whom Tender documents are obtainable upon payment of Two Guinea deposit, refundable upon receipt of a bona-fide Tender.

Tenders to the undersigned before 8th FEBRUARY, 1960.

T. W. FAGG,

Clerk of the Council.

Council Offices,
Sidcup Place,
Sidcup.

BAGSHOT RURAL DISTRICT COUNCIL.

SEWAGE PUMPING STATION—
NEW ROAD, WINDLESHAM.

The Council invite TENDERS for the CONSTRUCTION of a SEWAGE PUMPING STATION and works incidental thereto.

Tender documents may be obtained from the Engineer and Surveyor, Council Offices, Bagshot, upon payment of £2 2s., which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders must be returned to the undersigned, in the envelope provided, not later than Noon on SATURDAY, 13th February, 1960.

The lowest or any Tender will not necessarily be accepted.

O. V. H. FARRANT,

Clerk of the Council.

Council Offices,
Bagshot, Surrey.

CONTRACTS

COUNTY BOROUGH OF IPSWICH.

EJECTOR STATION REPLACEMENT SCHEME.

FIXED-PRICE TENDERS are invited for the CONSTRUCTION of FIVE REINFORCED CONCRETE PUMPING STATIONS. Superstructures to the same. One Motor House, and approx. 1,250 lin. yd. of Spun-iron Rising Main, together with Sewerage and ancillary works. Tender documents may be obtained from the Borough Engineer and Surveyor, 19 Tower Street, Ipswich, upon payment of a deposit cheque of £5 ss., which will be released upon receipt of a bona-fide Tender, not subsequently withdrawn, and the return of all documents and Drawings.

Tenders, in plain sealed envelopes bearing no name to indicate the sender, and endorsed "Tender for Ejector Station Replacement Scheme," must be delivered to the undersigned by 12 Noon on MONDAY, 29th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

J. C. NELSON,

Town Clerk.

Town Hall,
Ipswich.

BOROUGH OF MOSSLEY.

TENDERS are invited for the SUPPLY of the FOLLOWING ROAD MATERIALS during the year ending 31st March 1961:—

- (1) Gully Pots.
- (2) Manhole Covers and Frames.
- (3) Fine Cold Asphalt and Precast Chippings.
- (4) Bituminous Macadam.
- (5) Screened and Unscreened Ashes.
- (6) Concrete Flags.
- (7) Concrete Kerbs.
- (8) Concrete Aggregates (Coarse).
- (9) Sand.
- (10) Bitumen Emulsion.
- (11) Coke.
- (12) Dustbins.
- (13) Paraffin.

Forms of Tender can be obtained from N. H. BOWDLER, Borough Surveyor, Town Hall, Mossley.

Tenders must be received by the undersigned in a plain sealed envelope, endorsed "Tender for —," not later than Noon on MONDAY, 22nd February, 1960.

The Council do not bind themselves to accept the lowest or any Tender, and reserve the right to accept any part of any Tender.

V. C. PROCTER,

Town Clerk.

38 Manchester Road,
Mossley.

BOROUGH OF ERITH.

PICARDY STREET (B.213) IMPROVEMENT.

TENDERS are invited for the REALIGNMENT of the EXISTING HIGHWAY over a length of approx. 400 lin. yd., involving the Construction of Dual Concrete Carriageways each 20ft. wide, and Artificial Stone Paved Footways, together with Turfed Areas and Matching in Approach Roads, with Flexible Carriageway Construction.

Drawings may be inspected, by appointment, at the Office of the Borough Engineer and Surveyor, Town Hall, Erith, from whom Tender documents may be obtained on payment of £2 2s. deposit, which will be refunded on receipt of a bona-fide Tender which is not subsequently withdrawn.

Tenders are to be submitted on the form provided, endorsed in a plain sealed envelope, "Picardy Street Improvements," and delivered to the undersigned not later than 12 Noon on FRIDAY, 19th February, 1960.

The contractor must be prepared to enter into a formal contract and bond with two sureties for the due performance of the Contract.

The Council do not bind themselves to accept the lowest or any Tender.

J. A. CROMPTON,

Town Clerk.

Town Hall,
Erith, Kent.

GUISBOROUGH URBAN DISTRICT COUNCIL.

LACKENBY AND SOUTH LACKENBY
SEWERAGE.

TO SEWERAGE CONTRACTORS.

The above Council invite TENDERS for the FURNISHING and LAYING of about 1,150 lin. yd. of 9in. and 6in. EARTHENWARE PIPE SEWERS, complete with Manholes, etc., and other appurtenant works.

Contractors desirous of tendering are requested to send their names and addresses to MESSRS. D. BALFOUR AND SONS, Consulting Engineers, Caledonian Buildings, 145 Pilgrim Street, Newcastle on Tyne, 1, Engineers for the work, accompanied by a cheque for £5 made payable to the above Council, not later than 15th FEBRUARY, 1960, after which full particulars will be forwarded. The deposit will be returned on receipt of a bona-fide Tender and on return of all particulars after the Contract is let.

It is essential that the contractor should have had considerable experience in similar works and be prepared to furnish good and approved security for the fulfilment of the Contract.

Sealed Tenders, endorsed "Tender for Sewerage Works," must reach the undersigned by a date to be given by the Engineers.

The Council do not bind themselves to accept the lowest or any Tender.

G. W. BEEL,

Clerk of the Council.

Council Chambers,
Guisborough, Yorks.

WEDNESFIELD URBAN DISTRICT COUNCIL.

ASHMORE PARK ESTATE—
SURFACE WATER OUTLETS.

FIXED-PRICE TENDERS are invited for the PROVISION of SURFACE WATER OUTLETS on the Ashmore Park Estate.

The works comprise approx. 560 lin. yd. of 15-24in. dia. Spigot and Socket Precast Concrete Pipes, including Construction of necessary Manholes, and other incidental works.

Specification, Bills of Quantities, and Form of Tender may be obtained from THOS. A. PEACOCK, M.I.Mun.E.Cert.B.I., Engineer and Surveyor, Pennhurst, 29 Eilton Road, Wednesfield, Staffs., where Drawings and Conditions of Contract may be examined on payment of a deposit of £2 2s., returnable on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in envelope provided, endorsed "Ashmore Park Estate—Surface Water Outlets," should be returned to the undersigned not later than 12 Noon on MONDAY, 15th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

J. HENWOOD-JONES,

Clerk of the Council.

Council Offices,
Alfred Squire Road,
Wednesfield, Staffs.

CONTRACTS

ANGUS COUNTY COUNCIL.

The County Council will shortly issue Schedules for the FOLLOWING SCHEMES:—

- (a) Lintrathen Water Supply—Contract No. 7. 100,000-gallon R.C. Tank, 20 miles 7in. 6in. 4in., 3in. and 2in. A.C. Water Mains.
- (b) Lundie/Auchterhouse/Tealing—Contract No. 3. 25 miles 6in., 4in., 3in. and 2in. A.C. Water Mains.

Contractors wishing to tender are invited to apply before 29th FEBRUARY, 1960, to the County Engineer, County Buildings, Forfar, stating whether contract documents for (a) and/or (b) are required.

IAN A. MACKNIGHT,

County Clerk.

County Buildings,
Forfar.

19th January, 1960.

WIRRAL URBAN DISTRICT COUNCIL.

RELIEF SEWER—PIPERS LANE, HESWALL.

FIXED-PRICE TENDERS are invited for SUPPLYING and LAYING approx. 187 lin. yd. of 24in. dia. CONCRETE PIPES, 131 lin. yd. of 21in. dia. CONCRETE PIPES, 177 lin. yd. of 15in. dia. CONCRETE PIPES, together with ancillary works.

The Specification, Bills of Quantities and Form of Tender may be obtained on application to the Engineer and Surveyor, Council Offices, Heswall, at which Office the Conditions of Contract and Contract Drawings may be inspected.

Tenders, in plain sealed envelopes endorsed "Relief Sewer—Pipers Lane, Heswall," must be delivered to the undersigned not later than 10 a.m. on SATURDAY, 6th February, 1960.

The Council does not bind itself to accept the lowest or any Tender received.

W. F. ROBERTS,

Clerk of the Council.

Council Offices,
Heswall, Wirral.

20th January, 1960.

BRIERLEY HILL URBAN DISTRICT COUNCIL.

SUPPLY OF MATERIALS, HIRE OF TRANSPORT
AND DIRECT LABOUR WORK, 1960-61.

TENDERS are invited for the SUPPLY of the FOLLOWING MATERIALS AND STORES, the HIRE of TRANSPORT, and for DIRECT LABOUR WORK for the year ending March 1961.

PART 1—HIGHWAYS DEPARTMENT:

- (1) Roadstone, Slag and Chippings.
- (2) Tarmacadam and Bituminous Macadam.
- (3) Tar and Tar Compounds and Bituminous Emulsion.
- (4) Concrete Kerbs and Slabs.
- (5) Concrete and Stonecrete Pipes.
- (6) Cast-iron Manhole Covers, Gully Grates and Frames.
- (7) Shovels and Picks.
- (8) Cement and Sand.
- (9) Coal.
- (10) Hired Transport.
- (11) Labour, Plant Materials, i.e. Kerbs, Pavings, Footpaths, etc. (materials supplied by Council).
- (12) Premixed Waterbound Macadam.
- (13) Ready Mix Concrete.
- (14) Industrial Clothing.

PART 2—HOUSING DEPARTMENT:

- (1) Concrete Line Posts.
- (2) Chimney Pots.
- (3) Copper Tube Fittings.
- (4) Draining Boards.
- (5) Gas Wash Boilers.
- (6) Glaze Continuous-burning Fires.
- (7) Sheet Glass for Glazing.
- (8) Rails.
- (9) Paints and Distemper.
- (10) Cast-iron Gutters and Face Pipes.
- (11) Sinks.
- (12) Ball Valves and Floats.
- (13) Glazed Tiles.
- (14) W.C. Pans and Flushing Cisterns.
- (15) W.C. Ring Seats.

PART 3—PUBLIC HEALTH DEPARTMENT:

- (1) Dustbins.

Specification and Form of Tender may be obtained on application (with stamped addressed envelope) to the Engineer and Surveyor, Civic Buildings, indicating the items in which the inquirer is interested.

Tenders, in plain sealed envelopes, marked "Tender for Materials," to be returned to the undersigned not later than 12 o'clock Noon on WEDNESDAY, 24th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender, and reserve the right to accept any Tender in whole or in part.

HERBERT HEX,

Clerk of the Council.

Civic Buildings,
Brierley Hill, Staffs.

FRINTON AND WALTON URBAN DISTRICT COUNCIL.

SURFACE DRESSING OF ROADS, 1960-1961.

TENDERS are invited for SURFACE DRESSING of VARIOUS ROADS within the Urban District, totalling approx. 30,000 sq. yd., in accordance with the Specification and Schedule of Works, copies of which, together with the Form of Tender, may be obtained from the Engineer and Surveyor, The Council House, Frinton-on-Sea, Essex.

Tenders must be received by the undersigned, in a plain sealed envelope, endorsed "Tender for Surface Dressing," by MONDAY, 22nd February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

J. P. McLARNEY,

Clerk of the Council.

The Council House,
Frinton-on-Sea.

January, 1960.

NESTON URBAN DISTRICT COUNCIL.

TWIN CULVERT—CHURCH LANE, NESTON.

TENDERS are invited, on a Fixed-price Basis, for the CONSTRUCTION of 36in. dia. TWIN CONCRETE TUB CULVERT to STANNEY BROOK, Church Lane, Neston, to replace existing stone culvert, together with new Parapet and Wing Walls, Regrading of Watercourse, and ancillary works.

Drawings may be inspected at the Office of the Engineer/Surveyor, Town Hall, Neston, Wirral, from whom Tender documents may be obtained.

Tenders should be forwarded, in plain sealed envelopes, endorsed "Stanney Brook Culvert," to be received by the undersigned not later than 10 a.m. on SATURDAY, 13th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. H. D. HARTMAN,

Clerk of the Council.

Town Hall,
Neston, Wirral.

30th January, 1960.

CONTRACTS

LANCASHIRE COUNTY COUNCIL.

TENDERS are invited for the FOLLOWING

CONTRACT:
Roadworks and Bridge works in the Extension of the Widnes Approach Road—Contract "B," from the Termination of Contract "A" Northwards towards Dilton Road.

The Roadworks comprise about 210 lin. yd. of the Widnes Approach Road and about 270 lin. yd. of a Slip Road leading to the Trading Estate.

The Bridge works comprise the Construction of a Two-span Bridge, 123ft. long over private sidings, a Single 77ft. span Bridge over a main line railway, and a Reinforced Concrete Retaining Wall 285ft. long.

The Bridge consist of Steel Girders carrying a Reinforced Concrete Road Slab, and the Abutments and Wing Walls are of Brick-faced Mass Concrete. All Foundations are supported on Bored Cast In-situ Piles. Drawings and Contract documents will be available on the 6th FEBRUARY, 1960, on application to the COUNTY SURVEYOR, P.O. Box No. 9, County Hall, Preston, accompanied by a deposit of £25, which will be refunded only on receipt of a Tender and the return of all documents and Drawings supplied.

Cheques to be made payable to Lancashire County Council, Contractors to quote Ref. 135/51.

Tenders to be received not later than 10 a.m. on MONDAY, 7th March, 1960.

COUNTY BOROUGH OF EASTBOURNE.

BOROUGH ENGINEER'S DEPARTMENT.

ANNUAL TENDERS.

The COUNCIL invite TENDERS for the SUPPLY of the UNDERMENTIONED MATERIALS for the 12 months commencing on 1st April, 1960:—

- No. Material
- (1) Ballast and Sand.
- (2) Cement and Lime.
- (3) Granite Chippings.
- (4) Tarmacadam.
- (5) Precast Concrete Paving Slabs and Kerb.
- (6) Dustbins.
- (7) Brooms and Brushes.
- (8) Hired Haulage.

General Conditions, Specifications and Forms of Tender may be obtained from the Borough Engineer, 2/4 Saffrons Road, Eastbourne.

Tenders must be delivered to the undersigned on or before 20th FEBRUARY, 1960. No Tender will be considered unless it is sent in a plain sealed envelope, addressed to the undersigned, bearing the word "Tender" (followed by the subject to which it relates), but not with any name or mark indicating the sender.

The Council do not bind themselves to accept the lowest or any Tender, and reserve the right to accept the whole or any part of a Tender.

F. H. BUSBY,
Town Clerk.

Town Hall,
Eastbourne,
22nd January, 1960.

COUNTY BOROUGH OF HALIFAX.

AMENDED ADVERTISEMENT.

TENDERS FOR STORES FOR THE YEAR ENDING 31ST MARCH, 1961.

TENDERS are invited for the SUPPLY of the FOLLOWING MATERIALS:—

- (1) Stone Kerb, Edging and Flags.
- (2) Granite and Limestone Chippings.
- (3) Cement.
- (4) Broken Stone, Sand and Gravel.
- (5) Earthenware Pipes and Gutters.
- (7) Precast Concrete Flags, Kerb and Edging.
- (8) Tarred and Bituminous Macadam.
- (10) Tar and Bituminous Spraying Compounds.
- (13) Castings.
- (14) Bricks.
- (15) Fine Cold Asphalt.
- (16) Ready Mixed concrete.

Forms of Tender may be obtained from the Borough Engineer, Crossley Street, Halifax.

Tenders must be delivered to the undersigned by FRIDAY, 5th February, 1960.

RICHARD de J. HALL,
Town Clerk.

Town Hall,
Halifax.

BOROUGH OF UXBRIDGE.

ANNUAL TENDERS.

TENDERS are invited for the SUPPLY of the FOLLOWING MATERIALS for the year ending 31st March, 1961:—

- Item
- (1) Washed Sharp Sand.
- (2) Soft Sand.
- (3) 3in. All-in Ballast.
- (4) Shingle.
- (5) Slag Tarmacadam and Bitumen Macadam.
- (6) Granite Tarmacadam and Bitumen Macadam.
- (7) Granite Chippings.
- (8) Tarred Granite Chippings.
- (9) Tar Applied to Roads.
- (10) Portland Cement.
- (11) Ashes.
- (12) Paint and Distemper (Specified Brands)
- (13) Dustbins.
- (14) Gumboots.
- (15) Protective Leather Gloves.
- (16) Street Lighting Lamps.

Tender Forms for each of the above items may be obtained from HAROLD E. G. STRIPP, Esq., A.M.I.C.E., Borough Surveyor, 263 High Street, Uxbridge, Middlesex, and should be returned to me, in the envelope provided, by First Post on MONDAY, 22nd February, 1960.

E. RONALD WEST,
Town Clerk.

Council Offices,
263 High Street,
Uxbridge, Middlesex.

ASHTON-UNDER-LYNE, STALYBRIDGE AND DUKINFIELD (DISTRICT) WATERWORKS JOINT COMMITTEE.

DOVE STONE RESERVOIR.

The Committee contemplates proceeding, in the near future, with the CONSTRUCTION of the ABOVE RESERVOIR and sundry Pipelines connected therewith.

The Impounding Reservoir will be formed by an Earthwork Embankment about 1,865ft. in length and 124ft. in depth at the maximum point, together with the usual ancillary works such as Tunnels, Overflow, etc. The Committee are prepared to receive the names of firms experienced in this particular class of work, who wish to be placed on a list of those to be invited to submit Tenders.

Applications, which should give some details of work of this nature already carried out, should be addressed to the Secretary of the Committee, Waterworks Offices, Town Hall Chambers, Ashton-under-Lyne, and should reach him on or before the 9th day of FEBRUARY, 1960.

W. T. B. WHITSON,
Engineer and Manager.

CONTRACTS

EAST RIDING OF YORKSHIRE COUNTY COUNCIL.

TENDERS are invited for the UNDERMENTIONED MATERIALS AND SERVICES during the year ending 31st March, 1961:—

- (1) Tarmacadam and Bitumen Macadam (Supplying).
- (2) T.V.O., Gas Oil/Diesel Oil, Derv and Paraffin.
- (3) Tar.
- (4) Liquid Bitumen.
- (5) Cold Bitumen Emulsion.
- (6) Cold Asphalt.
- (7) Concrete Kerb, Flags, Channels and Edging.
- (8) Concrete Road Gutters.
- (9) Concrete Cylindrical Pipes.
- (10) Concrete Porous Pipes.
- (11) Sanitary Pipes.
- (12) Agricultural Land Pipes.
- (13) Reflecting Road Studs (Supply and/or Fix).
- (14) Heating and Planing of Road Surfaces.
- (15) Lubricating Oils.
- (16) Concrete Blocks.
- (17) Transport of Barber-Greene Machine.
- (18) Plastic White Lines (Supply and/or Lay).
- (19) Ready Mixed Concrete.
- (20) Stone, Rubble and Premixed Waterbound Macadam.
- (21) Surface Dressing of Roads.
- (22) Daywork by Team Labour and Motor Lorries.

Application for Forms of Tender (stating the form required) should be made to the County Surveyor, County Hall, Beverley.

Tenders, in a plain sealed envelope to be provided by the Council, endorsed "Tender for ——" and bearing no name or mark indicating the sender, are to be delivered to the undersigned not later than 4 p.m. on MONDAY, 8th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

THOMAS STEPHENSON,
Clerk of the County Council.

County Hall,
Beverley,
15th January, 1960.

ASHFORD (KENT) URBAN DISTRICT COUNCIL.

TENDERS are invited for the SUPPLY of the UNDERMENTIONED MATERIALS AND SERVICES for the year ending 31st March, 1961:—

- Contract No.
- (1) Tarred Macadam, Cold Asphalt, Granite Chippings.
- (2) Tar Compounds and Cold Emulsion.
- (3) Sand and Crushed Beach.
- (4) Precast Concrete Channels and Paving Slabs.
- (5) Portland Cement and Hydrated Lime.
- (6) Dustbins.
- (7) C.I. Manhole Covers and Street Gully Covers.
- (8) Mechanical Haulage and Rolling Plant.
- (9) Scavenger Brooms and Refills for Lacre/Bedford Sweeper.
- (10) Protective Clothing.
- (11) Coke.
- (12) W.C. Suites.
- (13) Electric Lamps.
- (14) Baling Wire.
- (15) Soaps and Disinfectants.
- (16) Bleach Powder, Salt, Sulphate of Alumina.

Applications for Form of Tender and Conditions, to be returned by the 12th FEBRUARY, 1960, should be made to the Surveyor, 1 Elwick Road, Ashford, Kent, stating the contract(s) in which interested, and enclosing a 6d. stamped addressed envelope.

G. L. REDFERN,
Clerk of the Council.

Council Offices,
Church Road,
Ashford, Kent,
20th January, 1960.

FRINTON AND WALTON URBAN DISTRICT COUNCIL.

ANNUAL TENDERS.

The Council invite TENDERS for the SUPPLY of the FOLLOWING MATERIALS for the year ending 31st March, 1961:—

- (1) Cement.
- (2) Sand, Broken Stone for Concreting and Footpath Gravel.
- (3) Precast Granite Concrete Paving Flags.
- (4) Tarred Granite or Slag and Limestone.
- (5) Cold Asphalt.
- (6) Granite Chippings.
- (7) Coal and Coke for Furnace.
- (8) Petrol, Diesel Oil, Paraffin and Lubricating Oils.
- (9) Softwood.

Specifications and Forms of Tender may be obtained from the Engineer and Surveyor, The Council House, Frinton-on-Sea, Essex.

Tenders, sealed and endorsed "Annual Tenders," bearing no indication of the sender, must be delivered to the undersigned not later than First Post on MONDAY, 8th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

J. P. MC LARNEY,
Clerk of the Council.

The Council House,
Frinton-on-Sea, Essex,
15th January, 1960.

BRIDGE-BLEAN R U R A L DISTRICT COUNCIL.

CHISLET (HOLLOW STREET) SEWERAGE SEWAGE DISPOSAL AND HOUSE CONVERSIONS.

TENDERS are invited for the EXECUTION of SEWERAGE and SEWAGE DISPOSAL WORKS, comprising the Laying of approx. 316yd. of 6in. dia. Sewers and 4in. dia. House Drains, the Carrying Out of Water Closet Conversion Works, and the Construction of a Sewage Treatment works comprising a Brick Septic Tank, 16ft. dia. Percolating Filter, Humus Tank and Land Irrigation Area, including Fencing and other ancillary works.

Copies of the Specification, Bills of Quantities and Form of Tender may be obtained from the Engineer and Surveyor, Council Offices, Old Dover Road, Canterbury, on deposit of a fee of Two Guineas (cheques, postal orders, etc., to be made payable to the Bridge-Blean Rural District Council). The deposit will be refunded only upon receipt of a bona-fide Tender (with Bills of Quantities) lent for the purpose of tendering. Prints of the Drawings and the General Conditions of Contract may be inspected at the Office of the Engineer and Surveyor during normal business hours.

Tenders, in sealed envelopes endorsed "Sewerage, Hollow Street, Chislet," accompanied by the Specification, Bills of Quantities and General Summary, must reach the undersigned not later than 12 Noon on MONDAY, 7th March, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

I. F. SOILLEUX,
Clerk of the Council.

Council Offices,
41 Old Dover Road,
Canterbury,
22nd January, 1960.

CONTRACTS

COUNTY BOROUGH OF SUNDERLAND.

CONTRACTS FOR MATERIALS.

TENDERS are invited for the SUPPLY of the FOLLOWING for Six Months, commencing 1st day of April next:—

- (1) Steel Wire Reinforcement for Concrete.
- (3) Earthenware Pipes, Junctions, etc.
- (4) C.I. Rainwater and Soil Goods.
- (6) Timber.
- (7) Kerbs and Flags.
- (14) Portland Cement.
- (17) Bitumen Macadam, Broken Stone, Sand, etc.
- (19) Gullies, Manhole Covers, Step-Irons, Firegrates, etc.

Samples may be seen at Eden Vale Depot, Sunderland. Specifications and Forms of Tender from the Public Works Manager, Ivor House, 1-3 Otto Terrace, Sunderland.

No Tender will be considered unless enclosed in a sealed envelope marked "Tender," followed by the subject to which it relates, addressed to me, Town Hall, Sunderland, and delivered at my Office by 10 a.m. on SATURDAY, 6th February, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

G. S. MCINTIRE,
Town Clerk.

COUNTY BOROUGH OF SWANSEA.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

TENDERS FOR SUPPLY AND LAYING ASPHALT PAVING AND BITUMINOUS MACADAM ROAD CARPETS.

THE CORPORATION invite TENDERS for the FOLLOWING for the period 1st April, 1960, to 31st March, 1961:—

- (a) Supplying and Laying Two-coat Rolled Asphalt Paving on Carriageways and Footways.
- (b) Supplying and Laying Barber-Greene Machine on prepared Surfaces 1in. and 3in. Consolidated Bituminous Macadam in Carriageways.

Specifications, Conditions of Contract and Form of Tender may be obtained from the Borough Engineer and Surveyor, Guildhall, Swansea.

Tenders, in sealed plain envelopes which must not bear any name or mark indicating the sender, endorsed "Tender for Bituminous Macadam Surfacing" or "Tender for Asphalt Paving," must be delivered to the undersigned not later than WEDNESDAY, the 24th February, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

T. B. BOWEN,
Town Clerk.

The Guildhall,
Swansea,
21st January, 1960.

BOROUGH OF ILFORD.

CONSTRUCTION OF SPORTS PAVILIONS IN VARIOUS PARKS.

TENDERS are invited for the CONSTRUCTION of SPORTS PAVILIONS in the FOLLOWING PARKS:—

Seven Kings Park, Aldborough Road.

Goodmayes Park, Green Lane.

Goodmayes Park Extension, Goodmayes Lane.

Applications, in writing, for the Form of Tender, Bills of Quantities and Drawings in respect of either or all of the above projects should be made to the Borough Engineer, Town Hall, Ilford, accompanied by a deposit of £2 2s. for each set of documents, which will be returned on receipt of a bona-fide Tender (not subsequently withdrawn) and all documents issued.

Conditions of Contract may be inspected at the Borough Engineer's Office during normal working hours. Tenders, sealed in the envelope provided, endorsed "Tender for Sports Pavilion (insert appropriate name of project)," with no mark of identification as to the sender, must be delivered to the TOWN CLERK, Town Hall, Ilford, not later than 4 p.m. on the 23rd FEBRUARY, 1960.

Priced Bills of Quantities and copies of Drawings must be returned at the same time as the Tenders in the special envelopes provided.

The Corporation do not bind themselves to accept the lowest or any Tender.

BIRMINGHAM CITY TRANSPORT.

TENDERS FOR UNIFORM CAPS.

The TRANSPORT COMMITTEE invite TENDERS for the SUPPLY of UNIFORM CAPS, full particulars of which may be obtained upon application to the undersigned.

Tenders must be enclosed in a sealed envelope, endorsed "Tender for Uniform Caps, 9/2," and be delivered to the Town Clerk's Department, Room M43, Council House, Birmingham, 1, not later than 10 a.m. on TUESDAY, 9th February, 1960.

W. H. SMITH,
General Manager.

Birmingham City Transport,
Council House,
Congreve Street,
Birmingham,
January, 1960.

NORTH EAST LINCOLNSHIRE WATER BOARD.

BOREHOLE NO. 3 AT BARNOLDY-BY-BECK.

CONTRACT NO. B.1.

TENDERS are invited from experienced contractors for the SINKING and LINING of a 15in. dia. BOREHOLE, 150ft. deep, at Barnoldy-by-Beck, approx. three miles south of Grimsby.

Tender documents may be obtained on application to the undersigned.

Completed Tender, sealed in the envelope provided and endorsed "Tender for Barnoldy Borehole," should be delivered to the undersigned not later than First Post on TUESDAY, 16th February, 1960.

CYRIL COOPER,
Engineer and Manager.

Town Hall Square,
Grimsby,
19th January, 1960.

MAIDENHEAD FLOOD RELIEF SCHEME.

STAGE 1—CONTRACT 1.

The Conservators of the River Thames will shortly invite TENDERS for WORK OF IMPROVEMENT TO THE CUT AND MAIDENHEAD DITCH, near Bray, Berks.

Works will consist of Enlargement of Existing Watercourses and Formation of New Cuts, involving approx. 118,000 cu. yd. of Excavation and Disposal to tips off the site, and other ancillary works.

Drawings and documents are expected to be available shortly, and anyone wishing to tender is invited to write now to the CHIEF ENGINEER, Thames Conservancy, De Bohun Road, Reading, requesting documents when available.

CONTRACTS

BOROUGH OF ACTON.

EDUCATION COMMITTEE.

ANNUAL REDECORATION OF SCHOOLS.

TENDERS are invited for the ABOVE WORK.
Contractors wishing to TENDER should apply to the Borough Engineer, Town Hall, Acton, W.3, for Specifications and Schedules, stating the maximum value of the works they can undertake. Work will begin after 1st April, 1960.
Tenders, in sealed envelopes, endorsed "Tenders for Redecorations to Schools," should be returned to the BOROUGH EDUCATION OFFICER, Town Hall, Acton, W.3 by 19th FEBRUARY, 1960.
The Committee does not bind itself to accept the lowest or any Tender.

BOROUGH OF BROMLEY.

PARKFIELD PAVILION AND COTTAGE.

TENDERS are invited for the CONSTRUCTION of the EXTENSION to the PLAYING FIELD PAVILION and the GROUNDSMAN'S COTTAGE, Parkfield Recreation Ground, Bromley, Kent.
Drawings and Conditions of Contract (R.I.B.A. Forms adapted for Local Authorities) may be inspected upon application to the Borough Engineer, Municipal Buildings, Bromley, Kent.
Contractors wishing to tender should apply for the Bills of Quantities and Form of Tender not later than WEDNESDAY, 3rd February, 1960, to the Borough Engineer.
Tenders must be submitted in the envelope provided, to the undersigned not later than the date indicated on the Form of Tender, i.e., 4th MARCH, 1960.
The Council does not bind itself to accept the lowest or any Tender.

LIONEL KAYE,
Town Clerk.

Municipal Buildings,
Bromley, Kent.
18th January, 1960.

CITY OF BIRMINGHAM.

TO PUBLIC WORKS CONTRACTORS.

THE PUBLIC WORKS COMMITTEE invite TENDERS, on a Fixed-price Basis, for a Measure and Value Contract for the RECONSTRUCTION OF CARRIAGEWAYS AND FOOTWAYS and the CONSTRUCTION OF POUL WATER SEWERS, together with incidental works, in ASTON HALL ROAD (Part), between Witton Lane and Priory Road.

Copies of the Specifications, Bills of Quantities and Forms of Tender may be obtained on payment of £2.2s. at the Office of SIR HERBERT J. MANZONI, City Engineer and Surveyor, Civic Centre, Birmingham, 1, to whom all cheques should be made payable. The deposit will be returned on receipt of a bona-fide Tender.

Plans for the Road and Sewerage Works can be seen at Rooms 339 and M.39, respectively, Civic Centre, Birmingham, 1.

Tenders, enclosed in the envelope provided for the purpose, must be sealed and delivered to the Town Clerk's Office (Room No. B.21), Council House, Birmingham, 1, not later than 12 Noon on WEDNESDAY, 17th February, 1960, when they will be opened. Tenders received after that time will be rejected.

The Committee do not bind themselves to accept the lowest or any Tender.

T. H. PARKINSON,
Deputy Town Clerk.

Council House,
Birmingham, 1.

CITY OF NOTTINGHAM.

THE CORPORATION of the City of Nottingham invite TENDERS for the CONSTRUCTION of OUTFALL SEWERS in TUNNEL from the BESTWOOD PARK HOUSING ESTATE, Oxclose Lane, Nottingham.
Tender documents may be obtained from Mr. R. M. FINCH, O.B.E., M.I.C.E., City Engineer and Surveyor, The Guildhall, Nottingham, on payment of a deposit of Two Pounds, which will be returned on receipt of a bona-fide Tender.

The Tender, together with a priced copy of the Bill of Quantities, is to be delivered, in the official envelope supplied, not later than 5 p.m. on WEDNESDAY, 17th February, 1960.

The lowest or any Tender will not necessarily be accepted, and Tenders will only be considered from firms paying the local standard rate of wages, etc., and who conform to the working rules of the Nottingham district.

T. J. OWEN,
Town Clerk.

Guildhall,
Nottingham.
January, 1960.

ATHERTON URBAN DISTRICT COUNCIL.

HIGHWAYS MATERIALS.

TENDERS are invited for the FOLLOWING for the year ending 31st March, 1961—

- (1) Concrete Flags.
- (2) Concrete Kerbs.
- (3) Broken Stone and Sand.
- (4) Granite and Limestone Chippings.
- (5) Scavenging Brushes.
- (6) Iron Castings (Manhole Covers and Street Gullies).
- (7) Surface Dressing.
- (8) Portland Cement.
- (9) Bituminous Macadam and Cold Asphalt.

Tender Forms are obtainable from the Surveyor, Town Hall, Atherton, Manchester.

Tenders should be returned, in plain sealed envelopes, endorsed "Tender for —," so as to reach the undersigned not later than 12 Noon on SATURDAY the 13th February, 1960.

The lowest or any Tender will not necessarily be accepted.

S. G. BLAKEBOROUGH,
Clerk of the Council.

Town Hall,
Atherton,
Manchester.

TYNE IMPROVEMENT COMMISSION.

ELECTRIC CARGO CRANES.

The Tyne Improvement Commissioners invite TENDERS for the SUPPLY AND ERECTION of three 6-ton PORTAL ELECTRIC CARGO CRANES at the Tyne Commission Quay, Albert Edward Dock, North Shields.

A copy of the Contract documents and Drawing may be obtained on application to the undersigned. Tenders, in the envelope provided, with the Tender documents, and bearing no name or mark of the sender, must be delivered to the undersigned not later than Noon on TUESDAY, the 8th March, 1960.

The Commissioners do not bind themselves to accept the lowest or any Tender.

R. N. EGGLETON,
Secretary.

Tyne Improvement Commission,
Bewick Street,
Newcastle upon Tyne, 1.
20th January, 1960.

CONTRACTS

CORNWALL COUNTY COUNCIL.

CONSTRUCTION OF THREE SMALL BRIDGES AT TREGIRLS, TREGRENNA AND TRESMEAK.

ALTARNUN PARISH.

TENDERS are invited for the CONSTRUCTION of THREE SMALL BRIDGES over Fords at Tregirls on the Five Lanes-Tregirls Road, at Tregrenna on the Five Lanes-Tregrenna Road, and Tresmeak on the New Park-West Carne-Rising Sun Road. All the bridges have a span of 18ft. and an overall width of 15ft., the Abutment Walls are of Mass Concrete and the Decks are of Reinforced Concrete. The Contract includes the Provision and Consolidation of the Filling and the Roadworks.
Tenders must be on the basis of Fixed Prices. The works are to be started on or about the 7th March, 1960.

The Drawings may be seen at the Office of the County Surveyor, County Hall, Truro, from whom Contract documents may be obtained on payment of a deposit of £3, which will be returned on receipt of a bona-fide Tender.

Tenders must be delivered in a plain sealed envelope endorsed "Tender for Altarnun Fords," to the Clerk of the County Council, Room 3, County Hall, Truro, not later than 10 a.m. on MONDAY, the 8th February, 1960.

The County Council do not bind themselves to accept the lowest or any Tender.

E. T. VERGER,
Clerk of the County Council.

County Hall,
Truro.
20th January, 1960.

BOROUGH OF POOLE.

PUBLIC LIGHTING COLUMNS.

TENDERS invited for the SUPPLY of PRESTRESSED CONCRETE LAMP COLUMNS and Brackets, over a period of two years.

Details from Borough Engineer.
Tenders to me by 1st FEBRUARY, 1960.

J. G. HILLIER,
Town Clerk.

Municipal Buildings,
Poole.

HARLOW URBAN DISTRICT COUNCIL.

CONSTRUCTION OF ACCESS ROAD.

TENDERS are invited for the CONSTRUCTION of an ACCESS ROAD off HARBERTS ROAD into NORTHBROOKS PLAYING FIELDS, Harlow. The work consists of providing a 13ft. wide Access Road in Feasible Construction approx. 275ft. in length, together with a Car Park of 300 sq. yd. area. Appurtenant works include Footpaths and Surface Water Drainage.

Documents may be obtained from A. W. R. WEBB, M.I.C.E., M.S.M.E., Engineer and Surveyor, Notteswell Hall, Harlow, Essex, on payment of a deposit of £2.2s, which will be refunded on receipt of a bona-fide Tender. Cheques should be made payable to Harlow Urban District Council.

Tenders, in plain sealed envelopes marked "Construction of Access Road—Northbrooks," must be delivered to the CLERK OF THE COUNCIL, Notteswell Hall, Harlow, Essex, not later than 12 Noon, SATURDAY, 13th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

BRIDGE-BLEAN RURAL DISTRICT COUNCIL.

ERECTION OF 12 DWELLINGS AT HOLLOW STREET, CHISLET.

TENDERS are invited for the ERECTION of TWO PAIRS of THREE-BEDROOM HOUSES, ONE BLOCK of FOUR FLATS and ONE BLOCK of FOUR BUNGALOWS at Hollow Street, Chislet, and the Provision of External Services within the Curtilage of the Dwellings.

Copies of the Bills of Quantities and Form of Tender may be obtained from the Council Offices, 41 Old Dover Road, Canterbury, on deposit of a fee of Two Guineas (cheques, postal orders, etc., to be made payable to the Bridge-Blean Rural District Council). The deposit will be refunded only upon receipt of a bona-fide Tender.

Prints of the Drawings may be inspected either at the Office of the Architect, H. V. GODFREY, A.R.I.B.A., 63 Oxford Street, Whitstable, or at the Council Offices during normal office hours.

Tenders, in sealed envelopes endorsed "Houses, Hollow Street, Chislet," accompanied by the Bills of Quantities and the General Summary, must reach the undersigned not later than 12 Noon on MONDAY, the 7th March, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

I. F. SOILLEUX,
Clerk of the Council.

Council Offices,
41 Old Dover Road,
Canterbury.
22nd January, 1960.

SOUTH CARDIGANSHIRE WATER BOARD.

CONTRACT 23—MAINLAYING—LINK MAINS.

TREFILAN, VERWIG, TRESAITH, PENTREGAT, LLANGRANOG, FFYNNON LLAWDDOG, PONTIRWAUN, RHYDELEWIS, CAPEL CYNON, RHYDOWEN, PISGAG, FFYNNON BERW, CWMCOY, ADPAR, AND NEW QUAY.

The South Cardiganshire Water Board invite TENDERS from experienced contractors for the LAYING of approx. 4,000yd of 4in and 17,000yd of 3in ASBESTOS CEMENT and SPUN-IRON WATER MAINS, and incidental works in connection therewith.

The lengths of the link mains vary between 3,060yd. and 375yd.

Copies of the General Conditions of Contract, Specification, Bills of Quantities and Form of Tender may be obtained from the Engineers, MESSRS. ROPE AND RAFFETY, 9 Brewer's Green, Buckingham Gate, Westminster, London, S.W.1, on payment (by cheque only) of Two Guineas deposit, which will be returned on receipt of a bona-fide Tender and the return of all documents and Drawings supplied.

The Contract Drawings may be inspected at the Offices of the Engineers at the above address, or at the Offices of the Engineer to the Board, 36 Alban Square, Aberystwyth.

Tenders, on the forms supplied, with particulars of experience, must be delivered to the Clerk of the South Cardiganshire Water Board, County Office, Marine Terrace, Aberystwyth, not later than 16th FEBRUARY, 1960, in a plain sealed envelope endorsed "Tender for Mainlaying Contract No. 23."

The Board do not bind themselves to accept the lowest or any Tender.

J. E. R. CARSON,
Clerk of the Board.

County Office,
Marine Terrace,
Aberystwyth.

CONTRACTS

WEST SUSSEX COUNTY COUNCIL.

A.27—IMPROVEMENT FROM TRAVELLERS' JOY TO LELL AND ANCHOR, NORTBOURNE.

Public works contractors wishing to TENDER for the ABOVE ROAD WIDENING, involving the Construction of approx. 9,000 sq. yd. of Lean-mix Concrete Carriageway with Bituminous Surfacing, and Two Reinforced Concrete Culverts, should submit their names to MAURICE MILNE, B.Sc., M.I.C.E., M.I.Mun.E., A.M.I.Struct.E., A.M.T.P.I., County Engineer and Surveyor, County Hall, Chichester, not later than First Post on FRIDAY, 5th February.

T. C. HAYWARD,
Clerk of the County Council.

County Hall,
Chichester.
January, 1960.

BOROUGH OF UXBRIDGE.

CONTRACT NO. 432.

RECONSTRUCTION OF CHURCH HILL AND HIGH STREET, HAREFIELD (PART).

The BOROUGH COUNCIL invite contractors, with experience of similar work, who wish to be considered to TENDER for the ABOVE CONTRACT to submit their names and details of their experience to HAROLD E. G. STRIPP, A.M.I.C.E., Borough Surveyor, 263 High Street, Uxbridge, Middlesex, by 12th FEBRUARY, 1960. The work will comprise the Widening and Reconstruction of some 600 lin. yd. of Road by Kerbing and Forming Hard Shoulders to the existing narrow carriageway in Dry Lean Mix Concrete, Surfacing the whole with Bitumen/Tarmacadam, Constructing Tarmacadam Footways, and other ancillary works.

E. RONALD WEST,
Town Clerk.

265 High Street,
Uxbridge, Middx.

BOROUGH OF POOLE.

ANNUAL TENDER SUPPLIES.

TENDERS invited for SUPPLY AND DELIVERY of the FOLLOWING MATERIALS and EXECUTION OF WORK during period 1st April, 1960, to 31st March, 1961:

- | Tender Form. | Name of Tender. |
|---|-----------------|
| (1) Tarrad Macadam and Bituminous Macadam. | |
| (2) Asphaltic Bituminous Macadam and Fine Cold Asphalt. | |
| (3) Road Tar Mixture and Bituminous Compound. | |
| (4) Heating and Planing Road Surfaces. | |
| (5) Road Stone and Chippings. | |
| (6) Concrete Gravel, Sand, etc. | |
| (7) Concrete Paving Slabs. | |
| (8) Precast Kerbing, Channelling, Concrete Fencing Posts, etc. | |
| (9) Concrete and Stoneware Pipes and Fittings. | |
| (10) Motor Tyres, Tubes and Remoulds. | |
| (11) Hire of Road Rollers and Plant. | |
| (12) Hire of Motor Lorries. | |
| (13) Road Traffic Signs, etc. | |
| (14) Ironmongery, Tools, Cleaning Goods, etc. | |
| (15) Brooms, Brushes, etc. | |
| (16) Waterproof Clothing, Overalls, Rubber Boots, Gloves, etc. | |
| (17) Iron Castings, Manhole Covers, etc. | |
| (18) Motor Spirit, Burning Oil, etc. | |
| (19) Lubricating Oils, etc. | |
| (20) House Coal and Coke and Firewood. | |
| (21) Cement, etc. | |
| (22) Electric Wiring Supplies, Accessories and Time-switches. | |
| (23) Electric Lamps. | |
| (24) Batteries. | |
| (25) Street Lighting Lanterns (Electric). | |
| (26) Electric Water Heaters. | |
| (27) Gas Mantles. | |
| (28) Gas Lighting Sundries (Fittings, etc.). | |
| (29) Gas Lighting Glassware. | |
| (30) Purchases of Glass Bottles, Jars, etc., from Disposal Works. | |

Tender Forms from Borough Engineer, and applications must be accompanied by stamped, addressed envelope.

Tenders to me by 15th February, 1960.

J. G. HILLIER,
Town Clerk.

Municipal Buildings,
Poole.
January, 1960.

BOROUGH OF SURBITON.

MIDDLETON ESTATE—PHASE III—SURBITON.

ERECTION OF 29 HOUSES.

Contractors are invited to submit their names for permission to TENDER for the ABOVE-MENTIONED BUILDING WORK.

The Contract comprises the Construction of 29 Traditional type Houses in Pairs and Terraces. The Architect is CLIFFORD CULPIN, O.B.E., F.R.I.B.A., M.T.P.I., and the Quantity Surveyors MESSRS. DEARLE AND HENDERSON.

The contractors should indicate in their applications details of recent similar work they have executed and names and particulars should be received by the undersigned not later than Noon on 4th FEBRUARY, 1960.

Lists of Quantities will be posted out on 16th February and Tenders will be due in on THURSDAY, 17th March, 1960.

JOHN H. A. CRUNDELL,
Town Clerk.

Council Offices,
Surbiton.

BOROUGH OF WALTHAMSTOW.

BOROUGH ARCHITECT'S DEPARTMENT.

BUILDING WORKS SECTION.

TENDERS are invited for the SUPPLY of the FOLLOWING MATERIALS for the year ending 31st March, 1961:

- (1) Plumbers' Goods.
- (2) General Ironmongery.
- (3) Painters' Sundries.
- (4) Pastering and Roofing Materials.
- (5) Painters' Brushes.
- (6) Sheet Glass.
- (7) Cleft Chestnut Fencing.
- (8) Sand and Ballast.
- (9) Paint.
- (10) Salt Glazed Ware, Pipes and Fittings.

General Conditions, Specifications and Forms of Tender may be obtained from the Borough Architect, Town Hall, Walthamstow, E.17.

Sealed Tenders, in the envelope provided, must be delivered to the undersigned not later than 12 Noon on FRIDAY, 26th February, 1960.

The Council do not bind itself to accept the lowest or any Tender.

G. A. BLAKELEY,
Town Clerk.

Town Hall,
Walthamstow, E.17.

CONTRACTS

ROYAL COUNTY OF BERKSHIRE.

PRIVATE STREET WORKS ACT, 1892.

TENDERS are invited for MAKING-UP the FOLLOWING PRIVATE STREETS:—

- (1) Jack's Piece, Wootton (Part 1).
 - (2) Jack's Piece, Wootton (Part 2).
- The work on each of these roads will comprise a separate contract, and involves the following:—
- Jack's Piece (Part 1).—Approx. 300 sq. yd. of Hardcore and Bituminous Macadam Carriageway, 150 sq. yd. of Tarmacadam and Asphalt Footways, 100 lin. yd. of Kerbing, and incidental works.
- Jack's Piece (Part 2).—Approx. 900 sq. yd. of Hardcore and Bituminous Macadam Carriageway, 350 sq. yd. of Tarmacadam and Asphalt Footways, 270 lin. yd. of Kerbing, Highway Drainage, and incidental works.

Drawings may be inspected at, and Specification, Bills of Materials and Forms of Tender obtained from, the Office of the COUNTY SURVEYOR, Shire Hall, Reading, on payment of a deposit of £2 for each contract.

The £2 deposits will be refunded on receipt of bona-fide Tenders.

Tenders, in envelope provided, must be returned by not later than 12 Noon on FRIDAY, 12th February, 1960.

The Council does not bind itself to accept the lowest or any Tender.

METROPOLITAN BOROUGH OF WANDSWORTH.

MAINTENANCE OF GARDEN SURROUNDS.

TENDERS invited for MAINTENANCE OF GARDEN SURROUNDS to 14 HOUSING ESTATES, total area approx. 36 acres.

Tender documents, obtainable from the Borough Engineer, must reach me by 10 a.m., 10th FEBRUARY, 1960.

J. NOEL MARTIN, Town Clerk.

Municipal Buildings,
Wandsworth, S.W.18.

BODMIN BOROUGH COUNCIL.

ANNUAL TENDERS.

TENDERS are invited for the SUPPLY of the UNDERMENTIONED MATERIALS for the year ending 31st March, 1961:—

- (1) Disinfectants, Insecticides and Toilet Paper.
- (2) Road Brooms.
- (3) Precast Concrete Products.
- (4) Building Materials (excluding Paint).
- (5) Building Hardware, Fittings and Fireplaces.
- (6) Roadstones and Tarmacadam.
- (7) Supply and Installation of Electric Cookers.

Specification and Form of Tender may be obtained from the Borough Surveyor, Municipal Offices, Priory House, Bodmin.

Tenders, in the envelopes supplied, must be submitted to the undersigned not later than 22nd FEBRUARY, 1960.

The Council does not bind itself to accept the lowest or any Tender.

I. WHITTING, Town Clerk.

Municipal Offices,
Priory House,
Bodmin,
22nd January, 1960.

CITY OF STOKE - ON - TRENT.

ROAD RESURFACING WORKS.

The CITY COUNCIL invite TENDERS from contractors who possess the necessary plant for the FOLLOWING SURFACING WORK to be done in the City during the year ending 31st March, 1961:—

- (1) Heating and Planing of existing Road Surfaces.
- (2) Supplying and Laying by Barber-Greene Machine:—
 - (a) Tarmacadam Base Course.
 - (b) Bituminous Macadam Base Course.
 - (c) Bituminous Macadam Wearing Course.
 - (d) Cold Asphalt Wearing Course.
- (3) Hot Rolled Asphalt Binder Course.
- (4) Hot Rolled Asphalt Wearing Surface.
- (5) Supplying and Laying Tarmacadam Footways (Two-coat Work).
- (6) Tar Spraying by Tank Pressure Sprayers.
- (7) Spraying Bituminous Retread Emulsions by Bulk Tank Pressure Sprayers.

Specifications, Tender Forms, etc., can be obtained on application to the City Engineer and Surveyor, Town Hall, Stoke-on-Trent, and all tenders are required to abide by the Standing Orders of the City Council.

Tenders, in the envelope provided, are to be submitted to the undersigned not later than 12 Noon on SATURDAY, 6th February, 1960.

HARRY TAYLOR, Town Clerk.

CITY OF STOKE - ON - TRENT.

HIGHWAYS ACT, 1959.

- (a) MAKING-UP AND WIDENING OF FEGG HAYES ROAD (PART), FEGG HAYES—CONTRACT NO. 908.
- (b) WHIELDON CRESCENT, FENTON—CONTRACT NO. 888.
- (c) WILLOWDALE AVENUE, FENTON—CONTRACT NO. 889.
- (d) LOUISE DRIVE (PART), BLURTON—CONTRACT NO. 896.
- (e) ST. MARGARET'S GROVE, BLURTON—CONTRACT NO. 897.

The CORPORATION invite TENDERS for the MAKING-UP of the ABOVE STREETS.

Drawings and Conditions of Contract may be seen and Bills of Materials and Specifications obtained from the City Surveyor's Department, Town Hall, Stoke-on-Trent, on payment of £2 each in respect of (a) and (b), which will be returned on receipt of a bona-fide Tender. Tenders and priced Bills of Materials must be delivered to the Town Clerk, Town Hall, Stoke-on-Trent, in the separate envelopes provided, not later than 12 Noon on WEDNESDAY, the 10th February, 1960.

HARRY TAYLOR, Town Clerk.

NORTH EAST LINCOLNSHIRE WATER BOARD.

WATER MAINS—BARNOLDBY-LE-BECK.

TENDERS are invited from experienced contractors for EXCAVATION, LAYING and JOINTING of 5.640yd. of 9 in. dia. SPUN-IRON WATER MAIN and 2,650yd. of 4 in. dia. ASBESTOS-CEMENT MAIN, together with Valves, Hydrants, etc.

Tender documents can be obtained from the undersigned, and completed Tenders must be returned to the Board by First Post on MONDAY, 15th February.

The Board do not bind themselves to accept the lowest or any Tender.

CYRIL COOPER, Engineer and Manager.

Town Hall Square,
Grimsby, Lincs.
21st January, 1960.

CONTRACTS

COUNTY BOROUGH OF SOUTHAMPTON.

ANNUAL TENDERS.

TENDERS are invited for the SUPPLY of the UNDERMENTIONED MATERIALS for the 12 months commencing 1st April, 1960:—

- Ballast and Grit.
- Gravel and Sand.
- Concrete Paving Slabs.
- Concrete Kerb and Channel.
- Natural Stone Kerb.
- Granite Chippings.
- Bitumen Road Emulsion.
- Bitumen Compound (supplied and applied).
- Road Tar (supplied and applied).
- Tarred Macadam.
- Stoneware Pipes and Fittings.
- Cleaning Rags, Waste and Mutton Cloth.
- Iron Castings.
- Savanning Brooms.

Specifications and Forms of Tender from Borough Engineer, Civic Centre, Southampton, to be returned to TOWN CLERK, in the official envelope provided, by WEDNESDAY, 10th February, 1960.

BOROUGH OF WALTHAMSTOW.

ARCHITECT, ENGINEER AND SURVEYOR'S DEPARTMENT.

WOOD STREET, B.160.

IMPROVEMENT OF JUNCTION WITH LEA BRIDGE ROAD.

TENDERS are invited for the CONSTRUCTION of the IMPROVEMENT of the JUNCTION of WOOD STREET with LEA BRIDGE ROAD, comprising the Widening and Resurfacing of the Existing Carriageway, the Construction of a Short Super-elevated Curve, together with Kerbing Footway Verge Drainage and other ancillary works, over a length of approx. 130yd.

Tender documents may be obtained from the Borough Architect, Engineer and Surveyor upon payment of a deposit of Two Guineas, returnable in respect of a bona-fide Tender not subsequently withdrawn. Drawings and Conditions of Contract may be inspected in office hours.

Sealed Tenders, in the envelopes provided, must be received by the undersigned not later than 12 Noon on MONDAY, 22nd February.

No Tender the envelope of which bears any name or mark indicating the identity of the sender will be considered.

G. A. ELAKELEY, Town Clerk.

CITY OF LANCASTER.

HIGHWAYS COMMITTEE.

The LANCASTER CORPORATION is prepared to receive TENDERS for the SUPPLY and DELIVERY of MATERIALS for the 12 months commencing 1st April, 1960, for the FOLLOWING, according to the printed Schedules and Specifications:—

- Brushes.
- Manhole Covers, Gully Gratings and Iron Castings.
- Gravel and Sand.
- Cement.
- Bitumen Macadam.
- Concrete Flags, Kerbs and Channels.
- Road Stones and Chippings.
- Sandstone Flags and Kerbs.
- Iron Water Pipes and Special Castings.

Forms of Tender and further particulars may be obtained at the Office of the City Engineer, Town Hall, Lancaster.

Tenders must be addressed to the Town Clerk, Town Hall, Lancaster, in plain sealed envelopes, endorsed "Tender for Materials," but not bearing any name or mark indicating the sender, and are to be delivered not later than 10 a.m. on FRIDAY, 19th February, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

J. D. WADDELL, Town Clerk.

Town Hall,
Lancaster,
28th January, 1960.

URBAN DISTRICT COUNCIL OF BENFLEET.

ANNUAL CONTRACTS.

TENDERS are invited for the SUPPLY of the FOLLOWING GOODS and SERVICES for a period of 12 months commencing 1st April, 1960:—

- (1) Precast Concrete Paving and Kerbs.
- (2) Cast-Iron Road Covers and Gullies.
- (3) Coal and Coke, etc.
- (4) Tared Stone and Cold Asphalt.
- (5) Cement, Lime and S.G. Pipes.
- (6) Overall, Donkey Jackets and Rubber Boots.
- (7) Sand, Gravel, Hoggins, Hardcore and Clinker Ash.
- (8) Rebristling Brooms for Mechanical Sweeper.
- (9) Surface Dressing of Streets.
- (10) Paint, Distemper and Putty.

Form of Tender and further particulars may be obtained from the Engineer and Surveyor at the address below. Completed Tenders must be returned to me by not later than Noon on MONDAY, 22nd February, 1960. The Council do not bind themselves to accept the lowest or any Tender.

D. GRUDGINGS, Clerk of the Council.

Council Offices,
Thundersley, Essex.

STEVENAGE URBAN DISTRICT COUNCIL.

TENDERS FOR MATERIALS, ETC.

TENDERS are invited for the SUPPLY of the FOLLOWING ITEMS for the year commencing 1st April, 1960:—

- (a) Tared Granite.
- (b) Gravel Asphalt.
- (c) Bitumen Macadam.
- (d) Cold Asphalt.
- (e) Dustbins.
- (f) Concrete Slabs.
- (g) Concrete Kerbs.
- (h) Cement.
- (i) Sand.
- (j) Ballast.

Forms of Tender may be obtained from J. D. MARSHALL, A.M.I.C.E., A.M.I.Mun.E., A.M.T.P.L., Engineer and Surveyor, and should be returned to the undersigned, in plain sealed envelopes, endorsed "Tenders for Materials," not later than Noon on FRIDAY, the 12th February, 1960.

The Council does not bind itself to accept the lowest or any Tender, and reserves the right to accept a Tender in whole or in part.

E. J. BOWERS, Clerk of the Council.

Council Offices,
Orchard Road,
Stevenage, Herts.
21st January, 1960.

CONTRACTS

CAERNARVONSHIRE COUNTY COUNCIL.

ANNUAL CONTRACTS.

TENDERS invited for SUPPLY of UNDERMENTIONED MATERIALS, etc., for year commencing 1st April, 1960:—

- No.
- (1) Concrete Kerbs and Paving Slabs.
- (2) Single-sized Roadstone and Chippings.
- (2a) Single-sized Gravel Aggregates for Roads.
- (3) Pitching Stone, Building Stone, Hardcore and Quarry Dust.
- (4) Concrete Aggregates.
- (5) Salt Glazed Ware, Concrete and Porous Concrete Pipes and Agricultural Drain Pipes.
- (6) and (7) Bitumen Macadam Fine Graded Cold and Warm Asphalt, and Precutted Chippings.
- (8) Heating and Planing of Road Surfaces.
- (9) Tar, Tar Compounds, Bitumen and Cold Emulsion.
- (10a) White Line Paint.
- (11) Hire of Rollers and Contractors' Plant.
- (12) Cement.
- (14) Gully Grids and Frames, Manhole Covers and Frames.
- (15) Traffic Signs.
- (16) Rock Salt.
- (18) Plastic White Line Materials.
- (19) Bulk Spraying (Hot Tar and Tar Bitumen Compound) and Supply and Lay of Pretreated Chippings.
- (20) Bulk Spraying of Bitumen Emulsion (Mist Spray Process).

Forms of Tender and further particulars from County Surveyor, County Offices, Caernarvon. Tenders to "CLERK OF THE COUNTY COUNCIL, County Offices, Caernarvon, by 13th FEBRUARY. Council not bound to accept any Tender.

COUNTY BOROUGH OF WEST BROMWICH.

CONTRACT NO. 112.

TENDERS are invited for the ERECTION of 66 OLD PEOPLE'S FLATLETS in THREE BLOCKS, each Two Storeys high, on Sites at YEW TREE, STONE CROSS and HATELEY HEATH.

Applications for Forms of Tender and Bills of Quantities should be made to the undersigned on or before 5th FEBRUARY, 1960.

Tenders should be returned to the undersigned, in a plain sealed envelope, on or before 12 Noon, MONDAY, 29th February, 1960.

W. H. GREENWOOD, A.M.I.C.E.,
M.I.Mun.E., A.M.T.P.L.,
Borough Engineer and Surveyor.

Town Hall,
West Bromwich.

BOROUGH OF BATLEY.

SUPPLY OF STORES.

TENDERS are invited for the SUPPLY of the FOLLOWING STORES and MATERIALS required by Batley Corporation General Works Department during the 12 months ending 31st March, 1961:—

- (1) Portland Cement.
- (2) Concrete Aggregates.
- (3) Concrete Kerbs and Flags.
- (4) Stone Kerbs.
- (5) Quartzite, Granite and Slag Chippings for Tarspraying.
- (6) Crushed Limestone.
- (7) Tar and Bitumen (Hot Spraying).
- (8) Bituminous Cold Emulsion.
- (9) Tarmacadam.
- (10) Cold Asphalt.
- (11) Hydrated Lime.
- (12) Salt Glazed Ware Pipes.
- (13) Bricks.
- (14) Salt.
- (15) Petrol, Oils and Lubricants.
- (16) Castings.
- (17) Ironmongery.
- (18) Dustbins and Gas Bolders.
- (19) Chromium-plated Water Taps.
- (20) Hand Brooms and Rebristling Brooms for Mechanical Road Sweeper.

Schedules and Forms of Tender may be obtained on application to the Borough Engineer, Hanover Street, Batley, and a stamped addressed foolscap envelope must be enclosed. Net prices must be quoted in all cases.

Tenders, in a plain sealed envelope (not bearing any name or mark indicating the sender), endorsed "Tender for Stores," must be delivered to the undersigned not later than the 20th FEBRUARY, 1960.

The Corporation does not bind itself to accept the lowest or any Tender, and reserves the right to accept part or parts of any Tender.

L. O. BOTTOMLEY, Town Clerk.

BOROUGH OF MALDEN AND COOMBE.

REPAIR AND RESURFACING OF BURLINGTON ROAD (B.282), SECTION I.

TENDERS are invited for REMOVING the ASPHALT SURFACE, BREAKING OUT as necessary DEFECTIVE CONCRETE CARRIAGEWAY and REPLACING with NEW and RESURFACING with HOT ROLLED ASPHALT of 1,500 sq. yd. of Burlington Road.

The Form of Tender and Specification may be obtained from JOHN APSE, A.M.I.C.E., Borough Engineer and Surveyor, Municipal Offices, New Malden, Surrey.

The closing date for Tenders is 12th FEBRUARY, 1960.

HAROLD E. BARRETT, Town Clerk.

Municipal Offices,
New Malden,
Surrey.

FARNHAM URBAN DISTRICT COUNCIL.

ROAD AND DRAINAGE WORKS—LOWER SOUTH VIEW, FARNHAM.

FIXED-PRICE TENDERS are invited for WORKS comprised in the ROAD AND DRAINAGE WORKS at Lower South View, Farnham, as follows:—

Approx. 200 lin. yd. 6 in. Sewer.

Approx. 600 super. Carriageway Foundation and

200 lin. yd. Concrete Kerb.

Bills of Quantities, Specification and Form of Tender may be obtained from the Engineer and Surveyor on payment of a deposit of £2 2s., which is returnable on receipt of a bona-fide Tender and/or the return of all documents.

Conditions of Contract and Drawings may be inspected at the Office of the Engineer and Surveyor during normal working hours.

Tenders shall be returned to the undersigned, in the enclosed envelope provided, not later than 9 a.m., THURSDAY, 3rd March, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

H. W. UNDERDOWN, Acting Clerk of the Council.

Council Offices,
South Street,
Farnham, Surrey.

CONTRACTS

COUNTY BOROUGH OF HUDDERSFIELD.

LOCKWOOD SCAR—WIDENING AND RECONSTRUCTION OF SEWER.

TENDERS are invited for the ABOVE-MENTIONED WORKS, comprising:

- (a) Reconstruction of the Existing Sewer, involving the Laying of 120 lin. yd. of 30in. to 45in. dia. Reinforced Concrete Pipes, 350 lin. yd. 21in. dia. Glazed Earthenware Pipes, and 120 lin. yd. of 12in. to 18in. Glazed Earthenware Pipes, and the Construction of One Stormwater Overflow, together with Manholes and other ancillary works.
- (b) Reconstruction and Widening of ½-mile of Lockwood Scar, including Demolitions, New Kerbs and Flexible Foundations and Surfacing with Two-coat Hot Rolled Asphalt, together with Accommodation and ancillary works and Retaining walls. The area of Carriageway involved is approx. 6,700 sq. yd.

Plans and Conditions may be seen, and Forms of Tender, Specifications and Bills of Quantities obtained, on application to A. L. PERCY, B.Sc., M.I.C.E., M.I.Struct.E., Borough Engineer and Surveyor, High Street Buildings, Huddersfield.

Deposit £3 3s., refunded on receipt of a bona-fide Tender not subsequently withdrawn.

Sealed Tenders, in the envelope provided, to be delivered to the undersigned not later than 10 a.m. on WEDNESDAY, 17th February, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

HARRY BANN,
Town Clerk.

Town Hall,
Huddersfield,
January, 1960.

BOROUGH OF DEAL.

ANNUAL TENDERS, 1960-61.

TENDERS are invited for the SUPPLY of the FOLLOWING ITEMS:

- | | |
|------------------------|--------------------|
| Tarmacadam. | Manhole Covers and |
| Crushed Grit. | Frames. |
| Ballast. | Scouring Powder. |
| Sand. | Soaps. |
| Clinker. | Floor Polish. |
| Refined Tar. | Toilet Rolls. |
| White Rags. | Armoured Gloves. |
| Dustbins. | Channel Brooms. |
| Precast Concrete Kerbs | Electric Lamps. |
| and Flags. | Motor Oils. |
| | Petrol and Derv. |

Forms of Tender may be obtained from the Borough Treasurer, 1A Victoria Road, Deal, Kent, and must be returned to the undersigned in a plain sealed envelope, endorsed "Tender for Materials," not later than 12 Noon on 20th FEBRUARY, 1960.

ERIC S. DIXON,
Town Clerk.

Municipal Offices,
Queen Street,
Deal, Kent.

RHYL URBAN DISTRICT COUNCIL.

STREET LIGHTING IMPROVEMENT.

The Council invites TENDERS for the SUPPLY and ERECTION of the FOLLOWING:

- (i) 45 Reinforced Concrete Columns.
- 9 Wall Brackets.
- 53 Lanterns with 3/80-W Fluorescent Lamps and Gear.
- 1 Post Top Lantern with 4/80-W Fluorescent Lamps and Gear.
- 4 Lanterns with 2/80-W Fluorescent Lamps and Gear.
- (ii) 64 Reinforced Concrete Columns.
- 64 Lanterns with 140-W Sodium Discharge Lamps and Gear.

Tenders will be received in respect of either (i) or (ii) or both.

Tender documents can be obtained from and Drawing inspected at the Office of the Surveyor, Council Offices. Tenders, in plain sealed envelopes, bearing no mark or indication of the sender, endorsed "Tender for Street Lighting," must be delivered to the undersigned by not later than First Post on MONDAY, 15th February, 1960.

The Council does not bind itself to accept the lowest or any Tender.

A. E. EDWARDS,
Clerk of the Council.

Council Offices,
Rhyll.

LETHWORTH URBAN DISTRICT COUNCIL.

FENCING.

TENDERS are invited for the PROVISION and ERECTION of approx. 1,200 lin. yd. of 4ft. high CHAIN LINK FENCING, together with ancillary works, on the GRANGE ESTATE, Lethworth.

Documents may be obtained from MR. E. L. JOHNSON, M.I.Mun.E., The Council House, Lethworth, upon payment of £2 2s. deposit, refundable on receipt of a bona-fide Tender, and Conditions of Contract and Drawings may be inspected in the office during normal working hours.

Tenders, in the envelope provided, should be returned not later than First Post on FRIDAY, 19th February, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

H. PLINSTON,
Clerk of the Council.

The Council House,
Lethworth, Herts.
January, 1960.

WOKINGHAM RURAL DISTRICT COUNCIL.

MAIN DRAINAGE OF WOODLEY—STAGE III.

SOIL AND SURFACE WATER DRAINAGE.

FIRM-PRICE TENDERS are invited for the LAYING of approx. 1,150 lin. yd. of 6in. SALT GLAZED WARE SEWERS, 1,150 lin. yd. of 7in. and 9in. SPUN-IRON PIPES, 1,350 lin. yd. of 30in. to 48in. PRECAST CONCRETE TUBES, the CONSTRUCTION OF ONE PUMPING STATION and 38 Manholes, the WIDENING and DEEPENING of 950 lin. yd. of DITCH, and ancillary works.

Tender documents and Drawings may be obtained from the Council's Chief Engineer on payment of a deposit of Three Guineas, refundable on receipt of a bona-fide Tender, not subsequently withdrawn, and all documents and Drawings.

Tenders, in plain sealed envelopes endorsed "Tender—Main Drainage of Woodley," must be delivered to the undersigned not later than Noon on 22nd FEBRUARY, 1960.

The Council does not bind itself to accept the lowest or any Tender.

GEOFFREY HEATH,
Clerk of the Council.

Council Offices,
Shute End,
Wokingham, Berks.

CONTRACTS

COUNTY BOROUGH OF NEWPORT.

TENDERS are invited for the ERECTION and PAINTING of STEEL LAMP COLUMNS and the PROVISION and SETTING INTO OPERATION of a SYSTEM of SODIUM LIGHTING UNITS, including Laying of Underground Cables in Kingsway (Part) and Chestow Road (Part).

General Conditions, Specifications and Bills of Quantities may be obtained from, and Drawings inspected at, the Offices of the Borough Engineer, Civic Centre, Newport, on production of the Borough Treasurer's receipt for a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender.

Tenders, enclosed in the envelope provided and endorsed "Sodium Lighting—Kingsway and Chestow Road (Part)," and not bearing any name or mark indicating the sender, must reach the TOWN CLERK not later than 1 p.m. on MONDAY, 15th February, 1960.

BOROUGH OF NEWBURY.

SEWAGE PUMPING STATION—LOWER WAY, NEWBURY.

TENDERS are invited for the SUPPLY and INSTALLATION of TWO IDENTICAL, ELECTRICALLY DRIVEN, VERTICAL SPINDLE, UNCHOKABLE, CENTRIFUGAL PUMPS, being capable when working together of dealing with 1,270 gallons per minute.

Specification, Drawings and Forms of Tender may be obtained from the Borough Surveyor, Municipal Buildings, Newbury, at whose Office the Conditions of Contract may be inspected.

Tenders, endorsed Sewage Pumping Station, Lower-way Lane," to be received by the undersigned not later than WEDNESDAY, 24th February, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

LESLIE SOUTHERN,
Town Clerk.

CONTRACTS

GLOUCESTERSHIRE COUNTY COUNCIL.

CHAPEL HAY LANE, CHURCHDOWN.

TENDERS are invited for 270 lin. yd. IMPROVEMENT to 18ft. CARRIAGEWAY plus Two KERBED FOOTPATHS, including approx. 300 cu. yd. Excavation, 270 sup. yd. Brick Walling, Drainage, etc.

Form of Tender, Specification, etc., may be obtained from the County Surveyor, Quay Street, Gloucester, to whom they should be returned, in plain sealed envelopes, endorsed "Chapel Hay Lane," not later than First Post on 15th FEBRUARY.

GUY H. DAVIS,
Clerk of the County Council.

MACCLESFIELD CORPORATION.

LAMALOAD RESERVOIR.

The Corporation will shortly be inviting TENDERS from a selected list of contractors for the CONSTRUCTION of an IMPOUNDING RESERVOIR of 420 million gallons capacity at Lamaload, near Macclesfield, Cheshire. The Contract involves the Construction of a Concrete Buttress Dam 600ft. long and 120ft. high, and ancillary works.

Contractors experienced in this work are invited to submit their names to the undersigned by MONDAY, 15th February, 1960, and should give a list and particulars of similar works they have carried out since 1945.

A list of selected contractors to be invited will be prepared in conjunction with the Corporation's Consulting Engineer, MESSRS. HERBERT LAPWORTH PARTNERS, and it is intended that work should be commenced in the late spring or early summer of this year.

WALTER ISAAC,
Town Clerk.

Town Hall,
Macclesfield.

BOROUGH OF MORLEY.

HIGHWAYS COMMITTEE.

ANNUAL CONTRACTS.

The MORLEY BOROUGH COUNCIL invite TENDERS for the SUPPLY and DELIVERY of the FOLLOWING MATERIALS for the year ending 31st March, 1961:—

- (1) Bituminous and Tarred Granite and Limestone.
- (2) Dry Granite, Limestone and Quartzite Chippings.
- (3) Concrete Aggregates.
- (4) Pea Gravel (for Road Gritting).
- (5) Portland Cement.
- (6) Salt (for Road Purposes).
- (7) Yorkshire Stone Flags, Kerb and Edging.
- (8) Concrete Flags, Kerb and Edging.
- (9) Earthenware Pipes and Gutters.
- (10) Sewerage Ironwork.
- (11) Brooms (for Street Sweeping).
- (12) Bitumen Emulsion.
- (13) Bitumen and Tar Supplied and Sprayed on Roads.
- (14) Cold Asphalt.

Tenders must be submitted on the forms which may be obtained from the Borough Engineer's Office, Town Hall, Morley, Yorks.

Tenders, in envelopes sealed and endorsed, but not bearing any name or mark to indicate the sender, to be delivered to the undersigned not later than TUESDAY, 9th February, 1960.

E. V. FINNIGAN,
Town Clerk.

Town Hall,
Morley, Yorks.

BOROUGH OF HAMPSTEAD.

TENDERS are invited for the SUPPLY of the FOLLOWING MATERIALS or SERVICES for one year from 1st April, 1960:—

- Removal of Clay and other Rubbish.
- Ballast and Sand.
- Artificial Footway Paving.
- Slag Tarmacadam.
- Brooms.

Tenders on forms obtained from TOWN CLERK, Town Hall, Haverstock Hill, N.W.3, must be received in Town Clerk's Office by 10 a.m. on 26th FEBRUARY, 1960.

WESSEX REGIONAL HOSPITAL BOARD.

PARK PREWETT GROUP HOSPITAL MANAGEMENT COMMITTEE, NO. 10—BASINGSTOKE, HANTS.

TENDERS are invited for the SUPPLY of the UNDERMENTIONED to Park Prewett Hospital during the six months commencing 1st April, 1960:—

- | | | |
|----------|-----|-----------------------------------|
| Contract | No. | Details |
| | (1) | Malt Liqueurs. |
| | (2) | Earthenware. |
| | (3) | Leather and Grindery. |
| | (4) | Boots and Shoes. |
| | (5) | Paint Brushes. |
| | (6) | Paints and Oils. |
| | (7) | Oils—Engineering and Farm. |
| | (8) | Petrol and Fuel Oils. |
| | (9) | Hardware, Enamelware and Tinware. |

Forms of Tender will be supplied on written application, enclosing stamped addressed foolscap envelope, to the undersigned. Tenders must be sent in sealed envelopes, addressed to the Group Secretary as below, marked "Tender for —," and must be delivered by post or otherwise not later than 9 a.m. on 29th FEBRUARY, 1960.

FREDERICK HALES,
Group Secretary.

Park Prewett Group Hospital Management Committee,
Basingstoke, Hants.

EAST DEVON WATER BOARD.

ANNUAL TENDERS.

TENDERS are invited for the SUPPLY of the UNDERMENTIONED MATERIALS for the year ending 31st March, 1961:—

- (1) Portland Cement.
- (2) Sand and Gravel.
- (3) Hardcore and Pitching.
- (4) Tarmacadam.
- (5) Cast-iron Surface Boxes.
- (6) Gunmetal Stopcocks and Ferrules.
- (7) Copper Tubing.
- (8) Fittings for Copper Tubing.
- (9) Polythene Plastic Tubing.
- (10) Fuel and Lubricating Oil.

Specifications and Forms of Tender may be obtained from the Engineer in the Board at the address below. Completed Tenders are to be delivered, in plain sealed envelopes, endorsed "Annual Tenders," to the undersigned not later than First Post on MONDAY, 22nd February, 1960.

The Board does not bind itself to accept the lowest or any Tender.

D. G. BRUCE,
Clerk of the Board.

The Laurels,
46 New Street,
Honiton, Devon.

Talbot Street,
Maesteg, Glam.

CHAPEL-EN-LE-FRITH RURAL DISTRICT COUNCIL.

HOPE VALLEY WATER SUPPLY.

FIXED-PRICE TENDERS are invited for the LAYING of approx. 3,000yd. 6in. ASBESTOS MAIN and for the Carrying Out of ancillary works.

Bills of Quantities and Form of Tender may be obtained from the Engineer and Surveyor at the address below, on payment of a deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender and the return of all documents.

Drawings and Conditions of Contract may be examined at the Offices of the Engineer and Clerk, respectively.

Tenders, endorsed "Hope Valley Water Supply," to be received by the undersigned, in a sealed envelope, not later than 9 a.m., 12th FEBRUARY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

T. KING-DAVIES,
Clerk of the Council.

Council Offices,
Hayfield Road,
Chapel-en-le-Frith,
Via Stockport,
22nd January, 1960.

CONTRACTS

SOMERSET COUNTY COUNCIL.
EDUCATION COMMITTEE.

Applications are invited from building contractors wishing to submit a FIXED-PRICE TENDER for the ERECTION OF STREET SECONDARY MODERN SCHOOL (632 Cost Places) and AREA COLLEGE. The approx. total area of the project is 77,000ft. super., and the contract period will be 24 months. Applications should be submitted to the undersigned not later than WEDNESDAY, 3rd February, 1960, and should contain an assurance that the applicant has the necessary financial and material resources and organisation to complete a contract of this size within the time stated. The Committee reserves the right to select from the applicants a list of firms who will be invited to submit Tenders, and does not bind itself to accept the lowest or any Tender. A deposit of £2 2s. will be required from those firms selected, which will be returned upon receipt of a bona-fide Tender or the return of the Bill of Quantities. No Tender will be considered unless submitted in the endorsed envelope which will be provided.

R. O. HARRIS, F.R.I.B.A.,
County Architect.

The Crescent,
Taunton.

COUNTY BOROUGH OF BRIGHTON.

FIXED-PRICE TENDERS are invited for the ERECTION OF NEW PAVILION for ROTTINGDEAN MINIATURE GOLF COURSE.

Bills of Quantities and Form of Tender may be obtained from the Borough Surveyor, Engineer and Planning Officer, 26/30 King's Road, Brighton, on or after Friday, 29th January, 1960, on receipt of a returnable deposit of £2 2s.

Drawings may be inspected upon application to the Borough Surveyor's Office.

Tenders are to be delivered to the Town Clerk in the envelope provided, not bearing any name or mark indicating the sender, by Noon on SATURDAY, 27th February, 1960.

W. O. DODD,
Town Clerk.

CITY OF ST. ALBANS.

MAKING-UP MOUNT DRIVE AND THE RISE.

PRIVATE STREET WORKS ACT, 1892.

TENDERS are invited for the MAKING-UP, SEWERING AND PAVING OF THE ABOVE-MENTIONED STREETS, comprising the FOLLOWING WORKS:

1.608 lin. yd. of 6in. and 9in. dia. G.S. Sewers.
3.208 sq. yd. of Bitumen Macadam Carriageway.
1.997 sq. yd. A.S. Paving.

Tender documents may be obtained from, and Plans inspected at, the City Engineer and Surveyor's Office, 16 St. Peter's Street St. Albans during normal working hours.

Tenders, in envelopes provided, bearing no indication of the sender, must reach me by Noon, 22nd FEBRUARY, 1960.

B. V. ENTWISTLE,
Town Clerk.

38 St. Peter's Street,
St. Albans, Herts.

CITY OF OXFORD.

BANBURY ROAD NORTH SPORTS GROUND PAVILION.

TENDERS are invited for the CONSTRUCTION OF A PERMANENT BRICK SPORTS PAVILION and Changing Accommodation of approx. 2,000 super. ft. floor area.

Tender documents will be available in mid-February, and contractors wishing to tender should submit their names to the City Engineer, Town Hall, Oxford, not later than 8th FEBRUARY, 1960.

Documents will be forwarded as soon as possible after this date, and Tenders must be returned to the undersigned, P.O. Box 7, Town Hall, Oxford, not later than 12 Noon on 7th MARCH, 1960.

HARRY PLOWMAN,
Town Clerk.

Town Hall,
Oxford.

URBAN DISTRICT COUNCIL OF KIDSGROVE.

CLOUGH HALL FOOTBALL FIELD.

TENDERS are invited from specialist contractors for the COMPLETE RECONSTRUCTION OF THE ABOVE FIELD. The works comprise the Erection-up of the existing Surface, Drains, Filling to Low Areas, Grading, Soiling and Seeding.

Specifications, Bills of Quantities and Form of Tender may be obtained from the Engineer and Surveyor, Town Hall, Kidsgrove, Stoke-on-Trent, on payment of a deposit of Two Guineas, returnable on receipt of a bona-fide Tender.

Tenders, in the envelopes provided and bearing no mark or indication of the sender, must be returned to me not later than 5 p.m. on WEDNESDAY, 17th February, 1960.

The Council does not bind itself to accept the lowest or any Tender.

O. LLOYD HURST,
Clerk of the Council.

Town Hall,
Kidsgrove, Staffs.

CHISLEHURST AND SIDCUP URBAN DISTRICT COUNCIL.

REPAINTING OF COLUMNS.

TENDERS are invited from experienced contractors for REPAINTING approx. 330 25ft. and 350 15ft. STREET LIGHTING COLUMNS.

Contractors desiring to tender should send their names and addresses to the Engineer and Surveyor, Manor House, Sidcup, by 12th FEBRUARY, 1960, with Two Guineas deposit, which will be refundable. Contract documents will be forwarded and closing date for Tenders notified.

T. W. FAGG,
Clerk to the Council.

Sidcup Place,
Sidcup.

LEATHERHEAD URBAN DISTRICT COUNCIL.

TENDERS are invited for the CUTTING AND TRIMMING of approx. 11 acres of VERGES and GREENS in small areas throughout the 1960 season. Tender documents and Plans may be inspected at Engineer and Surveyor's Department, Red House, Leatherhead.

Tenders, in the envelopes provided, to the undersigned by Noon, SATURDAY, 20th February, 1960.

J. EDE,
Clerk of the Council.

Council Offices,
Leatherhead.

CONTRACTS

EAST RIDING OF YORKSHIRE COUNTY COUNCIL.

TENDERS are invited for the SUPPLY of the FOLLOWING ARTICLES for the year commencing 1st April, 1960:—

Accommodation Outfits.
Detergents and Soaps.
Disinfectants.
Floor Sweeping Compounds.
Polishes.
Textiles.
Toilet Rolls.

Full particulars and Forms of Tender may be obtained from the Supplies Officer, County Hall, Beverley. No Tender will be received except in a plain sealed envelope supplied by the Council, bearing the words "Tender for —" and which shall not bear any name or mark indicating the sender. Tenders must be received by 4 p.m. on WEDNESDAY, 17th February, 1960.

THOMAS STEPHENSON,
Clerk of the Council.

BOROUGH OF DAGENHAM.

ELECTRICAL WIRING—FRIZLANDS ESTATE.

TENDERS are invited for the WIRING of an additional LIGHTING POINT on the UPSTAIRS LANDING of 230 PROPERTIES on the ABOVE ESTATE.

Specification and Form of Tender may be obtained from the Borough Engineer and Surveyor, 117 High Street, Dagenham. Tenders, in the official envelopes provided, must be delivered to me by 20th FEBRUARY, 1960.

KEITH LAUDER,
Town Clerk.

Civic Centre,
Dagenham.

BOROUGH OF LYMINGTON.

TENDERS are invited for the SUPPLY and DELIVERY of the FOLLOWING ITEMS for the period of 12 months ending 31st March 1961:—

(a) Road Materials.
(b) Concrete Commodities.
(c) Sanitary Requirements.
(d) Building Items.
(e) Manhole Covers, Gully Grates, etc.
(f) Petrol, Derv and Gas Oil.
(g) White Spirit, Creosote, Putty, etc.

Forms of Tender may be obtained from the Borough Engineer, Town Hall, Lympington, upon receipt of a stamped addressed envelope, or on application. Tenders to be delivered not later than MONDAY, 22nd February, 1960.

A. L. SLATER,
Town Clerk.

Town Hall,
Lympington.

BOROUGH OF SWINDON.

BROOME LINK SCHEME.

Experienced civil engineering contractors possessing a substantial organisation are invited to APPLY for the ABOVE CONTRACT.

The works, which it is hoped will commence in April and extend over a period of 18 months, will include the Laying of approx. 2 miles of 18in. and 24in. dia. Sewer, and the Construction of a 17ft. dia. Mass Concrete Balancing Tank.

Contractors wishing to be considered should submit their names, together with brief details of similar work recently carried out, including the names of the engineers responsible, to the Borough Engineer and Surveyor, Civic Offices, Swindon, not later than FRIDAY, 12th February, 1960.

From the names submitted, a panel of contractors will be chosen who will subsequently be provided with Specifications and Bills of Quantities.

D. MURRAY JOHN,
Town Clerk.

Civic Offices,
Swindon.

CARR'S QUIPS.—ESTIMATES are the life blood of any firm.—Injections given by "Doctor" R. J. CARR, Britain's Top Free-lance Estimator, 42 Coombe Road, New Malden, Surrey. Tel.: MAL. 8640.

WANTED TO HIRE OR SUB-CONTRACT.

6/12 large TIPPING LORRIES. Surrey district. SAM BOOTH LTD., Perrymount Chambers, Haywards Heath, Sussex. Telephone: Haywards Heath 1126.

For Contracts received too late for
classification see page 453

APPOINTMENTS VACANT

GOVERNMENT OF NYSALAND.

EXECUTIVE ENGINEERS.

PUBLIC WORKS DEPARTMENT.

Qualifications: Candidates (aged between 24 and 35) should have either a University degree or equivalent recognised by the Institution of Civil Engineers plus two years' practical experience; or have passed, or be otherwise exempt from, Parts I and II of the Final Examinations of the Institution of Civil Engineers and have had not less than five years' approved practical experience.

Duties will involve investigation, survey, design of civil engineering works and/or site supervision. Officers may be employed either at departmental headquarters, in a Provincial Engineer's Office, or on a construction site. Terms of Appointment: On probation to the permanent and pensionable establishment; or on contract for one tour of 30 to 36 months in the first instance, with gratuity on satisfactory completion of engagement.

Emoluments in the Scale £1,035-£1,950 p.a. pensionable; up to £1,215-£1,950 on contract. Free passages. Generous home leave. Quarters at rental (if available). Free medical attention. Taxation at local rates.

Apply DIRECTOR OF RECRUITMENT, Colonial Office, London, S.W.1. Give full name and age and brief details of qualifications and experience. Quote BCD12/4/D14.

MERIONETH COUNTY COUNCIL.

HIGHWAYS AND BRIDGES DEPARTMENT.

APPLICATIONS are invited for the APPOINTMENT of one ASSISTANT ENGINEER, Grade A.P.T. III of the National Joint Council Scales of Salaries.

Applicants should have had good experience in the design and preparation of road and bridge schemes. Preference will be given to candidates who are suitably qualified and have had previous experience under a County Authority.

Applications, on the Council's Application Forms, must be received by the COUNTY CLERK, County Offices, Penarlag, Dolgellau, by not later than MONDAY, 15th February, 1960.

APPOINTMENTS VACANT

METROPOLITAN BOROUGH OF SHOREDITCH.

DEPUTY ENGINEER AND SURVEYOR.

APPLICATIONS are invited for the ABOVE APPOINTMENT within J.N.C. Scale Grade C, at a commencing salary of £1,565 per annum, rising by an increment of £55 to a maximum of £1,620 per annum. Candidates must be qualified Civil Engineers or Municipal Engineers and must have had considerable experience in municipal and traffic engineering. Applications to the TOWN CLERK, Town Hall, Old Street, E.C.1, stating age, training and experience, and giving names of three referees, to arrive by 5th FEBRUARY, 1960.

BOROUGH OF LEYTON.

(Municipal Borough in Essex; population approx. 100,000)

BOROUGH ENGINEER'S DEPARTMENT.

APPOINTMENT OF WORKS SUPERINTENDENT.

APPLICATIONS are invited for the FOLLOWING PERMANENT APPOINTMENT: Works Superintendent within Grade A.P.T. V (£1,220-£1,375 p.a.), plus London Weighting of £30 p.a.

Applicants must have had considerable experience in the building industry, and the person appointed will be primarily responsible for the expansion of the Direct Labour Building Section of the Borough Engineer's Department and the supervision of all works carried out by Direct Labour.

Essential user car allowance and favourable consideration to the provision of housing accommodation. Details and Conditions of the Appointment may be obtained on application to the Borough Engineer, Town Hall, Leyton, London, E.10. To whom completed applications should be sent not later than MONDAY, 8th February, 1960.

D. J. OSBORNE,
Town Clerk.

Town Hall,
Leyton, E.10.

BOROUGH OF WANSTEAD AND WOODFORD

ASSISTANT WORKS SUPERINTENDENT—

A.P.T. II (£765-£880) PLUS LONDON WEIGHTING.

APPLICATIONS are invited for the ABOVE ESTABLISHED APPOINTMENT. Preference will be given to applicants with previous municipal experience, particularly on highways and sewerage work.

Details may be obtained from, and to be returned to, the BOROUGH ENGINEER, Municipal Offices, Woodford, E.18, by First Post on MONDAY, 8th February, 1960. Housing accommodation is available on a service tenancy.

BOROUGH OF EDMONTON.

SENIOR ENGINEERING ASSISTANT (ESTABLISHED)

APPLICATIONS are invited for this POST from persons who have passed the Final Examination of the Institution of Municipal Engineers, or equivalent. Salary within Special Grade £785-£1,070 plus London Weighting.

Applications, on forms obtainable from the undersigned, must be delivered by the 20th of FEBRUARY, 1960.

H. BACKHOUSE,
Town Clerk.

Town Hall,
Edmonton, N.9.

BOROUGH OF WEYMOUTH AND MELCOMBE REGIS.

LOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

RESIDENT ENGINEER—£1,200 P.A.

APPLICATIONS are invited from suitably experienced persons for the APPOINTMENT of a RESIDENT ENGINEER to supervise the construction of a sheet steel piled quays extension, together with ancillary works, and to supervise contracts for the making-up of private streets.

The appointment is for a period of 12 months, but with the possibility, subject to satisfactory service, of an extension to this period, and will be terminable by one month's notice on either side.

The salary will be £1,200 per annum and a car allowance will be paid in accordance with the Charter Scale.

Applications, stating age, qualifications, previous experience, and the names of two referees, should reach the Borough Engineer, 6 Putney Buildings, Weymouth, not later than 13th FEBRUARY, 1960.

Canvassing directly or indirectly will disqualify.

E. J. JONES,
Town Clerk.

Municipal Offices,
Weymouth.

January, 1960.

GUILDFORD RURAL DISTRICT COUNCIL.

CLERK OF WORKS (CIVIL ENGINEERING).

APPLICATIONS are invited for the ABOVE TEMPORARY POST at a wage of £15 per week, in connection with main drainage schemes.

The successful applicant will be required to provide a car, and an allowance not exceeding 1199 c.c. rate will be paid.

Applications, together with the names of two referees, to be sent to the undersigned on or before 1st FEBRUARY, 1960.

J. W. SNAPE, M.I.Mun.E., M.R.S.H.
Engineer and Surveyor.

Millmead House,
Guildford.

January, 1960.

STEVENAGE DEVELOPMENT CORPORATION.

APPLICATIONS are invited for the FOLLOWING APPOINTMENTS in the Chief Engineer's Department:—

(a) Engineer, A.P.T. IV, £1,065-£1,220. Applicants should have passed the final examination of either the Institution of Civil Engineers or the Institution of Municipal Engineers.

(b) Engineering Assistant, A.P.T. II, £765-£880. Applicants should have passed Part I of the Joint Examination of the Institution of Civil Engineers and the Institution of Municipal Engineers, hold the Higher National Certificate in Civil Engineering subjects, or hold a Degree in Civil Engineering.

The appointments offer interesting and varied engineering experience in the design, construction and supervision of roads, lighting services, sewerage and drainage. Superannuable posts. Medical examination.

Housing will be made available in due course where appropriate. Applications, stating full particulars, with names of two referees, to the CHIEF ADMINISTRATIVE OFFICER, Aston House, near Stevenage, Herts., by 5th FEBRUARY, 1960.

APPOINTMENTS VACANT

COUNTY BOROUGH OF GATESHEAD.

BOROUGH SURVEYOR'S DEPARTMENT.

APPOINTMENT OF CHIEF ENGINEER.

APPLICATIONS invited from suitably qualified persons for the ABOVE WHOLE-TIME APPOINTMENT. Applicants must have a wide experience in all branches of Municipal Engineering, Town Planning, Street Lighting, and the Layout and Development of Housing Estates, and possess a thorough knowledge of the administration of an Engineering Department in a large town. The successful applicant would be in charge of the Engineering Section and, as there is no Deputy, would be directly responsible to the Borough Surveyor.

Salary, Grade "C" of the Joint Negotiating Committee Scale, i.e. £1,385 rising to £1,620.

Post superannuable, medical examination, and one month's notice.

Favourable consideration will be given to the provision of housing accommodation.

Applications, stating age, qualifications, training and experience, with the names of three referees, to be sent to me by 12th FEBRUARY 1960.

C. D. JACKSON, Town Clerk.

Town Hall,
Gateshead, S.

BOROUGH OF BROMLEY.

CLERK OF WORKS (UNESTABLISHED).

APPLICATIONS are invited for the ABOVE APPOINTMENT at a salary within Scale A.P.T. I (£640-£795).

Candidates should be suitably experienced to perform the duties of a Clerk of Works pertaining to the supervision of contracts, preparation of reports, measurement of work, etc., for building works (flats, schools, etc.).

Applications, stating age, experience, present appointment and salary, and the names and addresses of two referees, should reach the Borough Engineer, Municipal Buildings, Bromley, by 8th FEBRUARY, 1960.

LIONEL KAYE, Town Clerk.

Municipal Buildings,
Bromley, Kent.

CITY OF BRADFORD.

QUANTITY SURVEYORS.

APPLICATIONS are invited for the FOLLOWING SUPERANNUABLE APPOINTMENTS in the City Engineer and Surveyor's Department:

(a) Quantity Surveyor, Post 208, Special Grade (£785-£1,070), according to qualifications.

Candidates should have passed the Final Examination of the appropriate professional body and be capable of undertaking all stages of work in the preparation of Bills of Quantities and preparation and settlement of Final Accounts, Site Measurements, Interim Certificates, and preliminary estimates in connection with multi-storey flats, houses, shops, etc., on large housing estates.

(b) Assistant Quantity Surveyors, Posts 155 and 163, Grade A.P.T.I. (£610-£765).

Candidates should have passed the Intermediate Examination of the appropriate professional body and should be capable of all stages of working-up, checking of accounts and site measurements.

No housing accommodation can be provided.

Application Forms, obtainable from the City Engineer and Surveyor, Town Hall, Bradford, 1, with three testimonials, must be received by the undersigned by 21st FEBRUARY, 1960.

HENRY PATTEN, Town Clerk.

Town Hall,
Bradford, 1.

CITY OF BRADFORD.

SENIOR QUANTITY SURVEYOR.

APPLICATIONS are invited for the SUPERANNUABLE APPOINTMENT OF SENIOR QUANTITY SURVEYOR (Post No. 170) in the City Engineer and Surveyor's Office, on Grade A.P.T.I. (£965-£1,220).

Candidates should have passed the Final Examination of the appropriate professional body and be capable of undertaking all stages of work in the preparation of Bills of Quantities and other Contract documents, measurement of work, preparation of certificates for payment of interim and final accounts in connection with multi-storey flats, houses, shops, etc., on large housing estates.

Application Forms obtainable from the City Engineer and Surveyor, Town Hall, Bradford, 1, with three testimonials, must be received by the undersigned by 21st FEBRUARY, 1960.

HENRY PATTEN, Town Clerk.

Town Hall,
Bradford, 1.

CITY OF NOTTINGHAM.

WATER DEPARTMENT.

APPOINTMENT OF CIVIL ENGINEERING ASSISTANT.

APPLICATIONS for the ABOVE PERMANENT, PENSIONABLE APPOINTMENT are invited from Graduate Members of the Institution of Civil Engineers or from University Graduates who have had five years' engineering experience (including the period spent on theoretical training). Salary, dependent upon qualifications and experience, in the Special Grade for Engineering Assistants (£785 x £406) x £45-£1,070.

Applications, with names of two persons to whom reference may be made, to Engineer and General Manager, Water Department, Castle Boulevard, Nottingham, not later than the 12th FEBRUARY, 1960.

T. J. OWEN, Town Clerk.

Town Hall,
Nottingham, 1.

HINDLEY URBAN DISTRICT COUNCIL.

SEWERAGE AND SEWAGE DISPOSAL.

APPOINTMENT OF RESIDENT ENGINEER.

APPLICATIONS are invited from experienced persons for the TEMPORARY APPOINTMENT OF RESIDENT ENGINEER to supervise the construction of 4½ miles of concrete and cast-iron pipe sewers from 15in. to 39in. dia., together with other appurtenant works.

The successful applicant will be required to work under the direction of the Council's Consulting Engineers, MESSRS. CHARLES J. LOMAX AND SON, of Manchester.

The duration of the contract is expected to be about 18 months, but he may subsequently be engaged on the supervision of extensions to the sewage disposal works. The salary offered is at the rate of £1,250 per annum.

Applications, endorsed "Resident Engineer," should be made in writing to the undersigned, not later than 9th FEBRUARY, 1960, giving full particulars of age, qualifications, and experience, together with the names and addresses of two or more referees.

F. HICKSON, Clerk of the Council.

Town Hall,
Hindley, Lancs.

APPOINTMENTS VACANT

GOVERNMENT OF JAMAICA.

ENGINEERS—PUBLIC WORKS DEPARTMENT.

Qualifications: Candidates (aged under 50) must be Associate Members of the Institution of Civil Engineers, or hold an equivalent qualification recognised by that Institution, and have had wide experience of drainage, flood protection and sewage disposal works.

Duties: Preparation of drawings, estimates and specifications for drainage schemes and supervision of these works during construction; also hydraulic computations and the design of flood control structures.

Terms: On contract for one tour of three years in the first instance, with salary £1,750 p.a. and gratuity on satisfactory completion of engagement.

Free passages. Generous leave. Quarters available at rental. Taxation at local rates.

Apply DIRECTOR OF RECRUITMENT, Colonial Office, London, S.W.1. Give full name and age and brief details of qualifications and experience. Quote BC/D112/32/016/D14.

LONDON COUNTY COUNCIL.

BUILDING SITE SUPERVISORS REQUIRED for erection of houses and blocks of flats by direct employment of labour. Wide experience of supervision on traditional building work and reinforced concrete construction as applied to multi-storey flats.

Salary according to qualifications and experience. Bonus on results may be earned in addition.

Apply, stating age, brief details of experience and qualifications, enclosing s.a.e. to DIRECTOR OF HOUSING, G/GS.1, County Hall, S.E.1. (118)

HOLLAND (Lincs.) COUNTY COUNCIL.

APPOINTMENT OF DIVISIONAL SURVEYOR.

A.P.T. GRADE IV.

APPLICATIONS are invited from qualified Civil or Municipal Engineers for the ABOVE APPOINTMENT at Boston. Preference will be given to those with experience in road construction and maintenance, and in the administration and control of staff with a County Headquarters or Divisional Office. The salary will be in accordance with A.P.T. Grade IV and the starting point will be determined by qualification and experience.

The appointment is subject to the National Scheme of Conditions of Service and to the Local Government Superannuation Acts. An essential user car allowance will be paid. The Council are prepared to contribute to cost of removal.

Further particulars may be obtained from the County Surveyor, County Hall, Boston, Lincs., to whom applications on the prescribed form, should be submitted not later than 12 FEBRUARY.

G. E. BETTS, County Surveyor.

County Hall,
Boston, Lincs.

METROPOLITAN BOROUGH OF LEWISHAM.

GENERAL FOREMAN (SEWERS).

Salary Scale £660-£745 p.a. (Misc. V plus London Weighing).

Further particulars and Form of Application from the TOWN CLERK (Dept. J), Lewisham Town Hall, London, S.E.6.

Closing date: 20th FEBRUARY, 1960.

METROPOLITAN BOROUGH OF SHOREDITCH.

The COUNCIL have in hand a varied and interesting programme of engineering works, and applications are invited for the FOLLOWING APPOINTMENTS:

(a) Senior Engineering Assistant—Salary A.P.T. V (£1,220-£1,375) plus London Weighing.

(b) Surveying Assistant—Salary A.P.T. IV (£1,065-£1,220) plus London Weighing.

Subject to medical examination, Council's Superannuation Scheme, and N.J.C. Conditions.

Candidates for appointment (a) must be Corporate Members of the Institution of Civil Engineers or Municipal Engineers, and have had considerable experience in Municipal Engineering. A qualification in Surveying would be an advantage for post (b).

Applications, stating age, training and experience, and giving the names of two referees, to reach BOROUGH ENGINEER, Town Hall, Old Street, E.C.1, by 13th FEBRUARY, 1960.

BOROUGH OF SLOUGH.

LANGLEY HIGH STREET SEWERAGE SCHEME.

AMENDED ADVERTISEMENT.

RESIDENT ENGINEER REQUIRED to supervise laying of up to 2½ in. dia. C.I. soil sewer and up to 45in. dia. concrete tube surface water sewer, together with ancillary works.

Duration of contract approx. 12 months, with possibility of extension of service for an additional period of up to two years for further schemes. Appointment terminable by two months' notice on either side.

Salary £1,500-£1,600 p.a. plus casual user car allowance. Housing accommodation for married candidate if required.

Applications, stating age, present and previous appointments, details of qualifications and experience, and names and addresses of two referees to reach BOROUGH ENGINEER, Town Hall, Slough, Bucks., by 8th FEBRUARY, 1960.

URBAN DISTRICT OF MERTON AND MORDEN.

ENGINEERING ASSISTANT REQUIRED. A.P.T. II to Special Grade (maximum £1,100). Commensurate salary dependent on qualifications and experience. Basic 5-day week.

Details from Engineer and Surveyor, Morden Hall, S.W.19, to whom applications should be made by 8th FEBRUARY, 1960.

SYDNEY ASTIN, Clerk of the Council.

Morden Hall,
S.W.19.

RURAL DISTRICT OF DEPSWADE.

ENGINEERING ASSISTANT.

The COUNCIL invite APPLICATIONS for this POST in their Engineer and Surveyor's Department from men having some experience.

The salary will be within A.P.T. Division Grade I (£610-£765 per annum).

Help with housing accommodation and removal expenses may be given if appropriate.

Application Forms to be obtained from the undersigned and returned by not later than the 8th FEBRUARY, 1960.

Canvassing in any form will be disqualifying.

W. J. FURTELL, Clerk of the Council.

Council Offices,
Pulham Market,
Diss, Norfolk.

APPOINTMENTS VACANT

COUNTY OF CORNWALL.

HIGHWAYS DEPARTMENT.

APPLICATIONS are invited for the APPOINTMENT of an ASSISTANT ENGINEER on Grade IV (£1,065-£1,220). A car allowance will be paid according to the National Joint Council's General Scale for cars not exceeding 10-h.p. or 1,199 c.c.

Applicants must be Associate Members of the Institution of Civil Engineers, or hold the Testamur of the Institution of Municipal Engineers, and have had considerable experience in design and preparation of major road schemes and execution of works, including small bridges and culverts.

The appointment is subject to the Local Government Superannuation Acts, 1937-53, and medical examination, Applications, giving age, education, qualifications, experience, and present salary, with copies of not more than three testimonials, should be sent to the County Surveyor, County Hall, Truro, not later than WEDNESDAY, the 17th FEBRUARY, 1960.

E. T. VERGER, Clerk of the County Council.

County Hall,
Truro.

14th January, 1960.

WEST SUSSEX COUNTY COUNCIL.

COUNTY SURVEYOR'S DEPARTMENT.

SENIOR ASSISTANT COUNTY SURVEYOR.

APPLICATIONS are invited for the ABOVE APPOINTMENT on the permanent staff at a salary of £1,385 per annum, rising to £1,620 per annum.

Candidates must be Associate Members of the Institution of Civil Engineers and/or the Institution of Municipal Engineers; the possession of an Engineering Degree will be an advantage.

The duties of the appointment envisage a wide experience in the preparation and organisation involved in the execution of major road and bridge improvement schemes, together with a high standard of general as well as technical ability.

Application Forms may be obtained from the County Surveyor, County Hall, Chichester, and must be returned to him duly completed not later than 19th FEBRUARY, 1960.

T. C. HAYWARD, Clerk of the County Council.

County Hall,
Chichester.

HAMPSHIRE COUNTY COUNCIL.

RESIDENT ENGINEER, A.P.T. Special Scale (£785-£1,070), for PERMANENT, PENSIONABLE POST in the County Surveyor's Department. Candidates should possess a thorough knowledge of both Contract and Direct Labour road and bridge works, and their site superintendence with removal and other expenses in approved cases.

Application Forms (send s.a.e.), returnable by 8th FEBRUARY, from the CLERK OF THE COUNTY COUNCIL, The Castle, Winchester.

BOROUGH OF EALING.

ENGINEERING ASSISTANT—£785 to £1,070, plus London Weighing. Candidates must have passed recognised final examination, be a "graduate" Member of the Institution of Civil Engineers, or a university graduate, and have had at least five years' experience, including the period spent on theoretical training.

No housing accommodation is offered with this post, but generous help with removal expenses will be given to successful applicant.

Full particulars and Application Form from Borough Surveyor, Town Hall, Ealing, W.5.

E. J. COPE BROWN, Town Clerk.

Town Hall,
Ealing, W.5.

THE CHIGWELL URBAN DISTRICT COUNCIL.

ASSISTANT SEWAGE WORKS MANAGER REQUIRED by Chigwell U.D.C. (Greater London; population 64,600).

Permanent staff. N.J.C. Conditions. A.P.T. Grade II, commencing £765, rising to £880, plus London Weighing.

Good opportunity for gaining experience of modern works and pumping stations. Medical examination. Service cottage (three-bedroom; post-war) will be made available at works within few months (at most) and residence there is a condition of appointment. Present rent 11s. per week, inclusive.

Applications, stating age and experience, present salary, previous appointments, names and addresses of two referees, to ENGINEER AND SURVEYOR, Council Offices, Loughton, Essex, by 16th FEBRUARY, 1960.

ESHER URBAN DISTRICT COUNCIL.

APPOINTMENT OF RESIDENT ENGINEER.

APPLICATIONS are invited from experienced persons for the ABOVE-MENTIONED APPOINTMENT, to supervise the construction of extensions to the Esher Sewage Disposal Works, comprising the construction of reinforced concrete sedimentation and humus tanks and biological filters, and incidental works.

The contract will be under the direction of the Consulting Engineers, MESSRS. J. D. AND D. M. WATSON, M.M.I.C.E., 67 Tuford Street, Westminster, S.W.1.

The salary will be in the range of £1,200 to £1,300 per annum, depending on qualifications and experience. The appointment, subject to satisfactory service, is expected to last approx. 21 months and will be terminable by two months' notice on either side.

Form of application and further particulars can be obtained from the Engineer and Surveyor, Council Offices, Esher, to whom applications must be delivered not later than the 17th FEBRUARY, 1960.

FREDERICK EDWARDS, Clerk of the Council.

Council Offices,
Esher, Surrey.

SOUTH CARDIGANSHIRE WATER BOARD.

APPOINTMENT OF ENGINEERING ASSISTANT.

APPLICATIONS are invited for the TEMPORARY POST OF ENGINEERING ASSISTANT on the Resident Engineer's staff on the Teifi Pools Scheme.

The appointment is for approx. 18 months and the duties include the setting-out, measurement and supervision of maintaining and service reservoir contracts.

The salary attached to the post is £280 p.a., with subsistence and travelling allowances at the rate of £150 p.a. plus a mileage allowance for use of the officer's own transport will also be given.

Applications, giving full details of qualifications, experience and names of two engineers for the purpose of supplying references, are to be returned to the Engineer, 36 Albert Square, Aberystwyth, not later than 15th FEBRUARY, 1960.

J. E. R. CARSON, Clerk to the South Cardiganshire Water Board.

Swydfair Sir,
Aberystwyth.

APPOINTMENTS VACANT

BOROUGH OF CHORLEY.

APPOINTMENT OF SENIOR ENGINEERING ASSISTANT.

APPLICATIONS are invited for the ABOVE-MENTIONED APPOINTMENT in the Borough Engineer's Department, at a salary within A.P.T. Grade III (£280-£1,065). Applicants should hold appropriate qualifications.

The National Scheme of Conditions of Service and the Superannuation Acts apply.

The Council will consider provision of housing accommodation for the successful applicant if required.

Applications, stating age, qualifications, and experience, with copies of two recent testimonials, must be received by the undersigned not later than the 8th FEBRUARY, 1960.

ROBERT POTTER, Town Clerk.

Town Hall,
Chorley.

AREA AGENTS REQUIRED to fully control, both commercially and technically, all types of industrial services pipework contracts for the chemical, oil and steel industries. One experienced agent will be considered. Salary range £1,200-£1,500. Superannuation scheme compulsory. Write Box V.1014, "The Contract Journal."

H. C. JAMES, LTD., invite applications for the following positions:

- (1) ARCHITECTURAL ASSISTANTS (a) with experience of the design of industrial and miscellaneous buildings; (b) with experience in designing layouts for housing estates.
- (2) CIVIL ENGINEERING ASSISTANT with experience of designing roads and sewers in connection with housing estate development.

A pension scheme is in operation, and assistance with housing may be granted. Apply, in writing, giving age, experience and salary required, to Head Office, 183 High Town Road, Luton.

ENGINEER WANTED for setting-out and general site supervision in the London area. This is a permanent position with excellent prospects for the right man. Applications, giving age, training to date and approximate salary, to MESSRS. WILSON LOVATT AND SONS, LTD., 16 Grosvenor Crescent, London, S.W.1.

PLANT HIRE company in South Wales REQUIRE OUTSIDE REPRESENTATIVE. Experience with Caterpillar and Ruston machines preferred. Give full particulars, including salary required, and previous experience, in confidence, to Box V.1039, "The Contract Journal."

GENERAL FOREMAN REQUIRED for civil engineering contracts. Applicants must have extensive experience on reinforced concrete structures, roads and sewers. Preference given to younger applicants interested in planned careers. Initially West London. Reply, stating age, salary required, full details of experience, to Box V.1024, "The Contract Journal."

BUILDING AND CIVIL ENGINEERING COMPANY

REQUIRE the following:—
PLANNING ENGINEER

To plan housing, flats, shops and some engineering works. Candidates should have a technical qualification of some standing in building or civil engineering, and have some experience of the applications of modern management techniques in the industry. This is a new appointment, and offers considerable scope for a suitable candidate.

FIRST-CLASS ESTIMATOR

For building and civil engineering contracts. Applicants must have had first-class experience and be capable of estimating for contracts of every size across London. This vacancy is being created by the expansion of the company, and the estimator will play his part in the future planned expansion.

PLANT MANAGER

To take charge of all its plant. The plant manager will be required to maintain the plant in first-class condition, and will be responsible for both "hire out" plant which is excess to the company and to "hire in" plant as requested. The right man will be given considerable freedom to develop all aspects of the job, and should have a minimum qualification in N.C. in mechanical engineering and supervision in the hire and maintenance of contractors' plant. Sites are in the Home Counties, and the company's head office is in the West End. Four-figure salaries are envisaged for the above appointments from applicants not over 40 years. Appointments will be permanent after a probationary period of six months, when applicants will be eligible for the company's sickness insurance scheme.

ASSISTANT SURVEYOR

With knowledge of site valuations and experience of preparation of bills of quantities. Some knowledge of estimating an advantage. Applicant should preferably be between 21 and 25 years, and a starting salary of not less than £700 per annum is envisaged.

Reply, in confidence, to:

BOX V.1026, "THE CONTRACT JOURNAL."

QUANTITY SURVEYOR REQUIRED for site measurement, interim valuations and final accounts, for building and civil engineering contracts. Please state full details of experience and salary required. JAMES DENNIS AND SON, LTD., Knowle, Braintree, N. Devon.

ENGINEER/AGENT REQUIRED by civil engineering contractors for sewage disposal contract. Applicants must have had a wide experience in reinforced concrete and deep excavation and be able to control up to 150 men. Contributory pension scheme after approved service; permanent. — Write, giving age, qualifications, experience and salary required, to Box V.9973, "The Contract Journal."

A SENIOR QUANTITY SURVEYOR is REQUIRED by expanding civil engineering contractors. This is a key appointment, permanent and pensionable, which offers considerable scope for the applicant with initiative and imagination. The successful applicant will be in charge of the quantity surveying department at head office and will be responsible for the preparation of interim and final accounts for general civil engineering and industrial building contracts. A car will be provided for site visits, but the position will not involve living away from home and should, therefore, be applied to those applicants with considerable site experience and who now wish to establish themselves in one area.—Applicants who should be aged between 35 and 45, should apply in writing, giving details of experience and present salary, to Chief Engineer, CLUGSTON CAWOOD, LTD., St. Vincent House, Normanby Road, Scunthorpe, Lincs.

JUNIOR SITE ENGINEERS REQUIRED by a firm of civil engineering contractors operating in North of England. Duties include setting, measurement and records, etc. Good salary and prospects offered to energetic young men. — Write Box V.9963, "The Contract Journal."

APPOINTMENTS VACANT

TERRESEARCH, LTD., REQUIRE for their permanent staff a GENERAL FOREMAN for bored piling and other foundation and reinforced concrete work. Applications are invited from men experienced in this type of work who are prepared to travel anywhere in the U.K. and to reside in the London area.—Apply in writing to TERRESEARCH, LTD., Ruslip Road, Northolt, Greenford, Middlesex.

CIVIL ENGINEERING ESTIMATOR, age about 50, with wide experience of estimating for all types of civil engineering contracts. REQUIRED by THE DEMOLITION AND CONSTRUCTION CO., LTD., 3 St. James's Square, London, S.W.1. Applications, in writing, should be made to the Chief Engineer at the above address, giving age, qualifications, details of experience, and salary required.

TROLLOPE AND COLLS, LTD., REQUIRE CIVIL ENGINEERING ESTIMATOR: Applicants may be engineer- or surveyor-trained with a wide experience and sound knowledge of competitive tendering for all types of civil engineering work.—Apply in writing, stating age, training, qualifications, and full details of past experience, with salary required, to the Assistant Secretary, Trollope and Colls, Ltd., 1 Noble Street, Gresham Street, E.C.2.

SITE ENGINEER REQUIRED for setting-out duties on main contract near Canterbury, Kent. Good prospects and permanency for suitable applicant.—Reply, with full details of age, experience, salary required, to M. J. GLEESON (CONTRACTORS), LTD., C.E. Dept. Harewood House, London Road, North Chesham, Surrey.

CIVIL ENGINEERING ESTIMATOR (Chief) REQUIRED for permanent, pensionable appointment at the London office of WILSON LOVATT AND SONS, LTD. Must have had previous experience as Senior Site Engineer or Agent and be capable of estimating for all classes of civil engineering work.—Applications, giving age, previous experience and approx. salary required, to 16 Grosvenor Crescent, London, S.W.1.

WORK STUDY ENGINEER

REQUIRED by CROUDACE, LTD., a fast expanding South London company of building and civil engineering contractors.—Must be fully experienced in method study and work measurement to join a well-established enthusiastic team dealing with the build-up of a synthetic library, incentives, short term and pre-tender planning, plant layout, etc. Salary in confidence, giving details of experience. Salary will be paid commensurate with age, qualifications and experience. Pension scheme. Free life insurance and assistance with housing if required.—Please write, in strict confidence, to:

The Managing Director,
CROUDACE, LTD.,
Caterham, Surrey.

MANAGER REQUIRED for rapidly expanding sectional concrete building works. Must have good organising ability and be strong disciplinarian. Duties are to supervise and control all departments of this company, which include mould, carpentry, steel fabrication dispatch, and erection departments. This is a permanent position and offers good prospects to suitable applicants.—Please write in confidence, giving details of experience, and salary required, to W. TIBBETTS AND SON, LTD., Barford Road, Bloxham, near Banbury, Oxon.

BUILDING SUPERVISORS REQUIRED by a national construction company. Applicants should have had considerable experience in the building industry and craft training. Salary in confidence, giving details of experience, and salary required, to Box V.1013, "The Contract Journal."

ESTIMATOR: D. B. EVANS (BILSTON), LTD., have VACANCY for a Midlands head office for a capable BUILDING ESTIMATOR with wide experience of competitive tendering for major building work. A car allowance will be paid, assistance given with housing if required, and a non-contributory pension scheme is in operation.—Apply in writing, in strict confidence, stating age, training, qualifications, experience, and salary required, to D. B. EVANS (BILSTON), LTD., Oxford Street, Bilston, Staffs, marking the envelope "Estimator."

HUMPHREYS, LTD.

AGENTS/GENERAL FOREMEN, holding building or civil engineering qualifications, are invited to submit details for consideration. Contracts in mind are mainly in London or the Home Counties. Superannuation scheme and other amenities available after trial period, plus attractive salaries.—Replies, please, to:

Personnel Manager,
HUMPHREYS, LTD.,
199 Knightsbridge, London, S.W.7.

TARMAC CIVIL ENGINEERING, LTD., have vacancies for experienced ESTIMATORS. These are permanent positions with good prospects for advancement.—Applications, which will be dealt with in strict confidence, must give details of age, experience, qualifications, salary required, and should be addressed to Managing Director, TARMAC CIVIL ENGINEERING, LTD., Ettinghall, Wolverhampton.

MARTIN COWLEY, LTD. The under-mentioned vacancies occur due to the company's expansion programme. Suitable applicants are offered a progressive and interesting career with remunerative salary, etc. Preference given to qualified civil engineers.—AREA AGENTS: Applicants must have had three to five years' experience, either as area agents or senior agents, on civil engineering projects. Positions offer an opportunity to progress to higher management.

AGENTS: Agents required for varied types of civil engineering projects. Preference given to applicants with similar experience, or those employed as senior engineers capable of accepting responsibility as Agent.

SENIOR AND JUNIOR SITE ENGINEERS: Applicants should be qualified engineers wishing to gain experience on varied civil engineering works. Positions offer an opportunity for promotion.

Apply in writing, stating fullest details of previous employers, technical qualifications and salary required, to 112 Jermyn Street, London, S.W.1.

STRUCTURAL or CIVIL ENGINEER with experience of bulk handling of granular materials REQUIRED to take charge of rapidly expanding department engaged in the construction of steel bulk storage silos. Exceptional opportunity for man with leadership, administrative ability and drive. Age 30 to 40. Salary £1,200, minimum plus bonus of profits pension scheme.—CONDER ENGINEERING CO., LTD., Winchester, Hants.

APPOINTMENTS VACANT

YOUNG CIVIL ENGINEER WANTED, preferably with some experience of estimating, to work in London head office of civil engineering contractors. This position is progressive and can ultimately produce a variety of experience apart from estimating, including the possibility of work overseas.—Write in the first instance, giving details of age, experience, salary prepared, etc. to Box V.9934 "The Contract Journal."

THE NORWEST CONSTRUCTION CO., LTD., Ruthven Road, Liverpool, 21, invite applications from AGENTS, SUB-AGENTS, FOREMEN/AGENTS, fully experienced in Post Office duct-laying and manhole building contracts. The positions are permanent and progressive. Good salary and bonus, and a superannuation scheme in operation. Successful applicants required to travel to different areas throughout the U.K.—Apply in writing, with full details of previous experience.

AN ASSISTANT ENGINEER IS REQUIRED by C. J. PEARCE AND CO., LTD., Civil Engineers and Public Works Contractors, of Southall, Dawley, Shropshire, England. Good salary and prospects in a young and growing company.

HUMPHREYS, LTD.

CHARGEHAND FOREMEN of proved ability REQUIRED. Attractive salaries positions available to the right men.—Details, please, to:

Personnel Manager,
HUMPHREYS, LTD.,
199 Knightsbridge, London, S.W.7.

A FIRST-CLASS PRACTICAL ENGINEER IS REQUIRED by C. J. PEARCE AND CO., LTD., Civil Engineers and Public Works Contractors, of Southall, Dawley, Shropshire, England. Good salary and prospects in a young and growing company.

AGENT/SUPERVISOR REQUIRED. Must be experienced in the laying both by machine and hand of hot-rolled asphalt and coated macadam. Good salary and conditions. Car provided. Work, in the main, will be in the Berkshire, Oxfordshire area, but must be prepared to travel.—Applications, in confidence, to The Manager, AMEY'S ASPHALT CO., LTD., Sutton Courtenay, Abingdon, Berks.

QUALIFIED SENIOR CIVIL ENGINEER for important prestressed concrete work in London. REQUIRED by contractors, offering also progressive career in growing organisation. — Write Box V.9998, "The Contract Journal."

JAMAICA: TECHNICAL SALES REPRESENTATIVE REQUIRED for leading distributors of earthmoving and allied equipment. Sound technical knowledge and wide practical experience essential. Applicants should be single, between ages of 26 and 44. Excellent prospects.—Write in strict confidence giving full details of previous employment and type of equipment handled, Box V.1047, "The Contract Journal."

SITE CASHIER: Applications invited from experienced men who have been Site Cashiers for at least the past five years and bonded and worked for a reputable national contractor, for large jobs in the Midlands area. Top salary and expenses offered to the right man.—WILSON LOVATT AND SONS, LTD., Clarence Street, Wolverhampton.

CIVIL ENGINEERING SUB-AGENTS REQUIRED for work in the Midlands area. Good wages and conditions offered, with plenty of scope for advancement. Non-contributory pension scheme in operation.—Apply to D. B. EVANS (BILSTON), LTD., Oxford Street, Bilston.

CIVIL ENGINEERING ASSISTANTS REQUIRED for site work on contracts. The work is varied and interesting, with opportunities for promotion and study of new methods. Applicants should be between the ages of 26 and 32, and hold a degree in civil engineering, or equivalent. They should have had a minimum of three years with a contractor on site work, which must have included setting-out and progress measurement. Experience in design of formwork and other temporary works, control of concrete quality would be an advantage.—Apply in writing, giving brief details of qualifications and experience, also stating age, to the Chief Engineer, THE DEMOLITION AND CONSTRUCTION CO., LTD., 3 St. James's Square, S.W.1.

CONTRACTS SUPERVISOR

REQUIRED by leading building contractors, for interesting work in London and the Home Counties. Applications invited, giving full details of previous experience, from men having suitable technical training and/or qualifications, and experience on important work, including preplanning. The appointment would offer excellent opportunities in a keen progressive organisation.

WRITE BOX V.1022, "THE CONTRACT JOURNAL."

JUNIOR CIVIL ENGINEERS REQUIRED to work on sites, with excellent opportunities for training. Applicants should be graduates, or equivalent, and should be between the ages of 20 and 26.—Apply in writing, giving brief details of qualifications and experience (including vacation course work), also stating age, to the Chief Engineer, THE DEMOLITION AND CONSTRUCTION CO., LTD., 3 St. James's Square, S.W.1.

TAKER-OFF REQUIRED at head office, Nottingham. Must be experienced all trades, also assist working-up and final accounts. Superannuation scheme in operation.—Apply, stating age, experience, and salary required, to J. J. SIMMS SONS AND CO., LTD., Haydon Road, Nottingham.

CONTRACTS MANAGER REQUIRED by a well-known firm of medium-sized contractors, head office in Central London, to manage projects in the Greater London area. Must possess sound qualifications, L.I.O.B. an advantage. 35 to 45 age group preferred. Write, stating age, experience and salary required, to Box V.1031, "The Contract Journal."

F. J. C. LILLEY (CONTRACTORS), LTD., have VACANCIES for SUB-AGENT/ENGINEERS and SECTION ENGINEERS on tunnel contracts in London and the Midlands. Applicants must have a sound knowledge of soft-ground tunnel work and be capable of supervising constructing and setting-out.—Civil engineers who have undergone a thorough training in the industry should apply to the Assistant General Manager, Great Cambridge Road, By Church Street, London, N.9.

RECORD CRANES are always interested in first-class ERECTORS with sound electrical knowledge, and good prospects.—Apply 36 Victoria Street, S.W.1, Victoria 4581.

APPOINTMENTS VACANT

SENIOR ENGINEER/AGENT for reconstruction work in London. The project is of exceptional technical interest and requires a man of good organisational ability.—Write Box V.9999, "The Contract Journal."

AGENTS REQUIRED for building contracts, London area. Applicants must have first-class administrative and practical experience in multi-storey and concrete-framed buildings and a progressive attitude to cost control and pre-planning. Good salary for merit with ability.—Apply writing to M. GLEESON (CONTRACTORS), LTD., Hareton House, London Road, North Chesham, Surrey.

CHIEF CIVIL ENGINEER REQUIRED, operating from head office, to take charge of building and reinforced concrete contracts. Must have previously had similar experience with national contractors. Write, giving full details of experience, age, and salary required, to Box 965 c/o Geo. Murray (Adv.), Ltd., Columbia House, Aldwych, W.C.2.

GENERAL FOREMAN (Building): Applications invited from Senior General Foremen who are at the top of their grade and have handled large building contracts in recent years, using initiative in site administration and practical application of all modern techniques, for work in the Midlands area. Carpenter and Joiner background. A good salary and fringe benefits and expenses and other staff terms will be available to the successful applicant.—WILSON LOWATT AND SONS, LTD., Clarence Street, Wolverhampton.

BUILDING INDUSTRY

STORES CONTROLLER for large building contractors in north-west. Should be able to initiate a comprehensive system of control for central and site stores, and to ensure adequate accounting and elimination of waste by correct handling and storage on sites. Excellent staff conditions, good salary, plus fringe benefits. Applicants should give full personal details and history of employment, in confidence.

WRITE BOX V.1018, "THE CONTRACT JOURNAL."

NORTH HERTS. building and civil engineering company REQUIRE ESTIMATOR/SURVEYOR experienced in handling from inquiry to final account. The appointment is progressive, leading to a more responsible managerial position.—Apply in writing to Box V.9972, "The Contract Journal."

ESTIMATOR/SURVEYOR: We are a large and progressive firm engaged in industrial building, housing and civil engineering. Our headquarters are in Birmingham with a subsidiary in South-West England. We have vacancies for SENIOR PLANNERS and feel that ESTIMATOR/SURVEYORS would best fill the position. Preference will be given to candidates who have received instruction in work study and planning techniques, but training will be given to successful applicants who have not had previous experience. We have a constructive staff policy, operation, superannuation and profit-sharing schemes. Assistance in car purchase and accommodation and excellent salaries will be paid in accordance with qualifications and experience.—For further details and application form, apply in strict confidence, giving brief particulars and quoting Ref. C/5160, to A. C. ERYANT, Managing Director, C. BRYANT AND SON, LTD., Whitmore Road, Birmingham, 10.

ASSISTANT ENGINEER REQUIRED, age 25-35, for design work on housing estate schemes, including site preparation, drawings, and specifications. Good knowledge of sewerage and road design and good draughtsmanship essential. Pensionable, permanent position with good prospects. Assistance can be given with living accommodation.—Please apply in writing, stating age, qualifications, commencing salary required, and giving full details, to Chief Engineer, CROUDACE, LTD., Caterham, Surrey.

READY MIXED CONCRETE

EXPERIENCED PERSONNEL REQUIRED.

COMMERCIAL MANAGER, Age 30-40. With ability and initiative to develop new department of an old-established business in the Midlands. Assistance with accommodation after satisfactory probationary period.

TECHNICAL ASSISTANT qualified to design mixes, carry out laboratory tests and technically assist with sales. Send full details of experience, ability, and present salary range, in confidence, to:

BOX V.1075, "THE CONTRACT JOURNAL."

COMPETENT MANAGER to take full charge of old-established builders' merchants business in busy town in Midlands. Must be very energetic, loyal, and have good connections. This old business has been neglected for some years; now taken over by a go-ahead firm. Financial interest would be given if required. Good salary with profit-sharing to right man.—Write Box V.9961, "The Contract Journal."

MARTIN COWLEY, LTD.: SENIOR ESTIMATOR with experience of tendering for heavy civil engineering projects. REQUIRED. Positions offer opportunity for promotion and an interesting career to suitable applicants.—Apply, stating full details, to 112 Jernyn Street, S.W.1.

YOUNG CIVIL ENGINEERS WANTED by London contractor for site work in the first instance. These positions are progressive and can produce a variety of experience, including the possibility of overseas work. Write initially giving details of age, experience, salary required, etc., to Box V.9966, "The Contract Journal."

FLY ASH Development in Scotland: STEPHENSON CLARKE, LTD. (Powell Duffryn Group) REQUIRE a competent SALESMAN to cover Scotland on Fly Ash sales. Adequate training afforded; car supplied; superannuation. The selected candidate should have, for preference, a previous builders' merchant background, be conversant with civil engineering work, and have ability to absorb and apply certain technical data and knowledge in these and other general fields. The post is a progressive, pioneering one, offering scope and great interest to an active, imaginative man. Generous salary according to qualifications, age. Age 30-45. Replies, in strict confidence, with a full copy reference, to Box V.1044, "The Contract Journal."

CONSULTING ENGINEERS in Glasgow have vacancies for JUNIOR CIVIL ENGINEERING ASSISTANTS, DESIGNERS and DESIGNER-DRAUGHTSMEN for hydro-electric works, roads, and bridges, shipyards, heavy foundations and structures, water supply, sewerage disposal, etc. Reply with particulars of age and experience and qualifications. Positions in office and on site.—Write Box 1614, Wm. Porteous and Co., Glasgow.

APPOINTMENTS VACANT

PLANT FITTERS AND MATES REQUIRED for overhauls of heavy civil engineering plant at contractors' plant depot in Watford. Experience on Ruston or C.N.K. excavator preferred. Permanent job. Good conditions.—Apply: MARPLES, RIDGWAY AND PARTNERS, LTD., Metropolitan Station Approach Road, Watford, Herts.

ESTIMATORS REQUIRED for building and civil engineering work. Applicants should be fully experienced.—Apply, in writing, stating age, past experience and salary required, to: CURRALL, LEWIS AND MARTIN, LTD., 11 Booth Street, Birmingham, 21.

GENERAL FOREMAN: Competent man WANTED for roads and sewers. Must be machine-minded and able to use dumpy level, for contracts in Stevenage. Permanent position for right man.—Apply, stating age, experience and wages required, to: STUTLEY BROS., LTD., Civil Engineering Contractors, Wymondley, Hitchin, Herts.

PUBLIC WORKS contracting company REQUIRES an ENGINEER-AGENT well experienced in reinforced and prestressed concrete construction. Good prospects with an expanding company.—Write in first instance, full particulars including salary required, in confidence, to WILLIAM T. NICHOLLS, LTD., St. Pauls Road, Gloucester.

PERSONNEL ADMINISTRATION LIMITED MANAGEMENT CONSULTANTS

Our Appointments Division has been asked to advise on the following posts:—

GENERAL MANAGER Civil Engineering Contractors For a well-known civil engineering contracting organisation with headquarters in the Home Counties. He will be responsible for the direction and administration of the company's activities throughout England and Wales. Starting salary up to £3,000, with company car and contributory pension. Future financial prospects for a successful man are attractive, and early appointment to the board is envisaged. Applicants between the ages of 40 and 45, should hold a professional qualification in civil engineering and have wide management experience in the contracting field. (Ref. 3353/CJ.)

CONTRACT CONTROL ACCOUNTANT Civil Engineering: Iran For an American consulting engineering organisation carrying out extensive construction work in South-West Iran. He will be responsible to the project engineer for the control and recording of costs and quantities on a major hydro-electric scheme. Applicants should be aged 25-40, and must offer a minimum of six years' on-site contract control experience and a thorough knowledge of construction materials. Ability to speak Italian would be a great advantage. Starting salary up to £2,300 including allowances. Free first-class travel to Iran and during leave periods. (Ref. 3549/CJ.)

GENERAL MANAGER Engineering: Surrey For a firm manufacturing a variety of machinery and equipment for public authorities and the contracting industry. The company is a subsidiary of a well-known group and is located in a pleasant Surrey town. Applicants should be aged 35 to 40, A.M.I.Mech.E., and have substantial experience of production management in this or an allied industry, preferably preceded by relevant design experience. Starting salary around £2,000, plus contributory pension. There are excellent prospects of promotion to board level. (Ref. 3354/CJ.) The identity of candidates will not be revealed to our clients without their prior permission.—For the convenience of clients and candidates, we have regional offices in Glasgow, Manchester and Birmingham, but, in the first instance, applicants should forward brief details, quoting the reference number, to:

PERSONNEL ADMINISTRATION LIMITED, Appointments Division, 2 Albert Gate, London, S.W.1.

STOREKEEPER REQUIRED for hydro-electric project in Wales. Must be experienced in the handling and recording of civil engineering materials and machine spares. Salary according to experience. Apply, giving full particulars of past experience, to Box V.1048, "The Contract Journal."

AN EFFICIENT ESTIMATOR/QUANTITY SURVEYOR REQUIRED, fully conversant with office and site experience. Only competent man need apply.—Write Box V.1029, "The Contract Journal."

FOREMAN/AGENT REQUIRED. Must have wide experience in sewers and deep excavation works, and be capable of controlling a contract up to final measurement. Permanent, progressive position. Pension scheme.—Write, giving full details, to Box V.1025, "The Contract Journal."

YOUNG SETTING-OUT ENGINEER REQUIRED. Permanent post with excellent prospects. Write in first instance, full particulars, in confidence, to W. T. NICHOLLS, LTD., St. Paul's Road, Gloucester.

TARMACADAM and asphalt company REQUIRE an ASSISTANT for their surfacing department. Must have knowledge of estimating and be able to carry out final measurements. Applicants should give details of previous experience and salary required. Apply: ROADS RECONSTRUCTION (1934), LTD., Surfacing Department, Chapel Lane, West Drayton, Middx.

ALLEN FAIRHEAD AND SONS, LTD.

Invite applications from COST and BONUS SURVEYORS who have had previous experience of systematic bonusing and cost control on contracts.—Applications, stating age, experience and salary required, should be forwarded to:

The Chief Surveyor, ALLEN FAIRHEAD AND SONS, LTD., Enfield, Middlesex.

SURFACE MAINTENANCE SERVICES, LTD. REQUIRE A QUANTITY SURVEYOR to work in the Bournemouth office. Applications invited from men aged 25-30 with experience on civil engineering works. The job will entail the responsibility for site measurement and the preparation of interim and final accounts for medium-size road and sewer contracts. Applications in writing, giving full details of past experience, salary required and two recent references, to Personnel Manager, 124 Old Christchurch Road, Bournemouth.

MANAGER REQUIRED by painting contractors for branch office at Exeter. Must be efficient administrator and have detailed knowledge of surveying for all classes of contract work. Accommodation available. Ultimate appointment as director suitable applicant.—Write, stating previous experience, salary required, etc., and for appointment, to Box V.1023, "The Contract Journal."

APPOINTMENTS VACANT

ENGINEER/AGENT REQUIRED for civil engineering contracts, mainly in the London area. Applicants should be under 40 years of age and must have had wide experience, particularly on roads and sewers. The successful applicant will be responsible for the control and supervision of all contracts on which he is engaged, and must possess drive and initiative, together with a cost-conscious attitude. The position is permanent and progressive, and a contributory pension scheme is in operation.—Please reply, giving details of age, qualifications, past experience and salary required, to: RUDDOCK AND MEIGHAN, LTD., Burford House, Harrow View, Wealdstone, Middlesex.

SITE ENGINEERS REQUIRED for long contract in the Colchester area.—Apply General Manager, FARRANS, LTD., 39 Upper Brock Street, London, W.1. Telephone: GROSVENOR 4966.

ESTIMATOR—The expanding civil engineering department of our Northern Ireland regional branch REQUIRES an Estimator experienced in tenders for roads, heavy foundations, water and sewerage schemes. This is a permanent and pensionable appointment.—Applications, please, to the Regional Manager, THE UNITED CONSTRUCTION CO., LTD., Hollywood, Belfast, Northern Ireland.

SITE ENGINEERS REQUIRED for road works and main drainage contracts in Home Counties. Good prospects for keen young men who are competent and experienced in setting-out, etc.—Apply in writing, giving details of training and experience, age, and salary required, to Box V.1070, "The Contract Journal."

EXPERIENCED ESTIMATOR REQUIRED by civil engineering contractors, to operate from head office, Reading area. Permanent position; prospects, with pension rights.—Write in confidence, giving age, details of experience, previous employers, and salary required, to Box V.1071, "The Contract Journal."

SURVEYOR: Applications invited from men, age range 26-45, who have had recent past experience in successful handling of final accounts for large building contracts work, including monthly certificates and variations, etc. Working from Wolverhampton as a base and visiting several jobs.—Applications should give full details of recent record of employment with a similar company, and responsibilities, addressed to Personnel Manager, WILSON LOWATT AND SONS, LTD., Clarence Street, Wolverhampton.

MAJOR BRITISH CIVIL ENGINEERING CONTRACTORS

Have vacancies for the following staff for their subsidiaries and associates in Africa:—

AGENT (SENIOR)
AGENT (JUNIOR)
SUB-AGENT
ACCOUNTANT (not necessarily fully qualified)
ASSISTANT ENGINEERS (qualified)
CONSTRUCTION FOREMEN (carpenter-trained)
FOREMAN FITTER
CASHIER

CHIEF STOREKEEPER Each appointment covers an initial 18-month tour. High salaries are offered, together with free furnished living accommodation, end-of-tour paid leave and bonus. Families' passages will be paid for the first four appointments in the above list. Applications, which will be treated in strict confidence, should give fullest details of career to date. Please reply to:

BOX V.1046, "THE CONTRACT JOURNAL."

GENERAL FOREMAN REQUIRED to supervise construction of concrete roads and sewers on large housing site, S.E. London.—Write, giving details of qualifications and experience, to: M. HOWARD (MITCHAM), LTD., Wandale House, London Road, Mitcham, Surrey.

AGENTS REQUIRED by SIR LINDSAY PARKINSON AND CO., LTD. Must be fully experienced all types building contracts, and mobile. These positions are pensionable and offer good chance of advancement.—Only applicants seeking such opportunities should apply to 6 Lambeth Road, St. George's Circus, London, S.E.1. Ref. H.J.1.

ENGINEERS, competent in setting-out, for roads, sewers and buildings, to operate on housing development.—Apply SIR LINDSAY PARKINSON AND CO., LTD., Building Department, 6 Lambeth Road, St. George's Circus, S.E.1.

HICKSON & WELCH, LTD., Chemical Manufacturers, Ltd., Llandow, Cardiff, Yorkshire. REQUIRE a CLERK OF WORKS to supervise large building programme and take charge of a maintenance building team.—Full particulars of employment from the Company Architect.

PLANT AND TRANSPORT MANAGER

Applications are invited for the above position. An expanding company of building and civil engineering contractors in Central Scotland are seeking an experienced and competent PLANT AND TRANSPORT MANAGER. The successful applicant will be required to control an extensive fleet of mechanical plant, commercial and private vehicles, equipment and stores; to organise and maintain an effective service to contract sites; to supervise operators and repair workshop labour; and to be responsible for the department's office and town records. Applications, from those possessing a sound administrative and practical knowledge, and stating full particulars of age, experience and present salary, should be addressed in the first instance and in strict confidence to:

The General Manager, BOX V.1062, "THE CONTRACT JOURNAL."

DEMOLITION MANAGER: Fully experienced Manager for demolition work REQUIRED, from estimating to finalising accounts. Applicant preferred who is at present holding similar position with prominent company. Inquiries will be dealt with in the strictest confidence.—Phone: HOLBORN 1661.

FOREMAN / AGENT REQUIRED for medium-sized road and drainage contracts at Exeter. Applicants must be experienced and self-reliant. Approx. six months' duration in first instance; possible permanency for right man.—D. LENNETT, LTD., Wallington, Fareham, Hants.

QUANTITY SURVEYOR: Excellent opportunity exists for Surveyor with wide experience in Ministry contracts, in a well-known building and civil engineering company with offices in Worcester; also JUNIOR SURVEYORS.—Write in confidence stating salary expected, to Box V.1064, "The Contract Journal," marking outside of envelope "Quantity Surveyor."

APPOINTMENTS VACANT

SUB-AGENTS AND ENGINEERS REQUIRED for various contracts throughout Scotland.—Write, giving details age and experience, to **DUNCAN LOGAN (CONTRACTORS), LTD.**, Great North Road, Muir of Ord.

QUALIFIED SURVEYOR, aged about 30, REQUIRED by large city company.—Write, giving full particulars, to Box G.V., c/o J. W. Vickers and Co., Ltd., 7/8 Great Winchester Street, E.C.2.

CIVIL ENGINEER: Applications invited from young Engineers with about five years' experience on building and civil engineering sites, to work in the Midlands area in the first instance, on large contracts. The positions are progressive and good salary and terms will be offered to selected applicants. Full details of training and experience should be sent to the Personnel Manager, **WILSON LOVATT AND SONS, LTD.**, Clarence Street, Wolverhampton.

OFFICE MANAGERS AND SITE STAFF: Southern Area and Glasgow Area. Vacancies occur on three large civil engineering contracts commencing shortly. Applicants must be keen, experienced and fully capable. Good commencing salary; excellent prospects; non-contributory pension scheme. On staff notified.—Details of age, experience, and salary required, to Box V.1055, "The Contract Journal."

THE GUEST, KEEN AND NETTLEFOLDS

group of companies REQUIRE a SUPERVISOR—wored pile work. A Supervisor to be based on the Midlands, is required immediately for a new department of a constituent company. The successful candidate will assist in the purchase of plant and the engaging of foremen and site labour, and will subsequently undertake responsibility for the general supervision of site work. Extensive practical experience of bored pile work is essential, particularly in the control of a large number of piling rigs. Preferred age 35-45. This is a staff appointment which is permanent and pensionable.—Applicants should write, giving details of age, experience and salary required, to:

The Group Personnel Officers,
GUEST, KEEN AND NETTLEFOLDS, LTD.,
66 Cannon Street, London, E.C.4.

CIVIL ENGINEER REQUIRED by **RICHARD COSTAIN, LTD.**, for work in Nigeria. Candidates, preferably aged 27-35, should be University Graduates, or equivalent, and must have at least five years' practical experience with contracts; this should include piling in water estuaries from barges, erection of steelwork and welding. Tours of 18 months, each followed by three months' paid leave in U.K. Salary £1,800 per annum, with messing and accommodation (bachelor) provided free. Kit allowance £80.—Please address applications to Overseas Personnel Officer, 111 Westminster Bridge Road, London, S.E.1.

ESTABLISHED company of building and civil engineering contractors REQUIRE the following: **PLANNING ENGINEER**: To plan housing, industrial construction, schools, office blocks, and some engineering works. Applicants should have a technical qualification in the building industry and preferably a period in a responsible controlling position on contract sites, and be conversant with modern construction methods and management technique. **SENIOR BUILDING ESTIMATOR**: Applicants should be capable of competitive tendering for all types of contracts up to £1m. or value and should be able to present completed tenders with calculations, for final discussion with the head of the department. These appointments are required due to the expansion of the building division. Permanent positions are intended and a superannuation scheme is in operation. Applicants should write in the first instance for an application form, and to work outside of strict confidence.—Apply to **THE NORWEST CONSTRUCTION CO., LTD.**, Ruthven Road, Litherland, Liverpool, 21.

CONTRACTORS' SURVEYOR REQUIRED for an expanding firm of reinforced concrete specialists. Applicants, preferably 25-35, must have experience in interim and final valuations, with some knowledge of taking-off and price build-up for all trades. This is an excellent opening for a man with drive and initiative to secure a progressive position in a well-established firm with good connections.—Write, giving details of age, experience, and present salary to Chief Surveyor, **THE LONDON FERRO-CONCRETE CO., LTD.**, Maxted Road, Hemel Hempstead, Herts.

HIGGS AND HILL, LTD., REQUIRE experienced TIMEKEEPERS/WAGES CLERKS between 25-35 years of age. Must be experienced in wages construction and P.A.Y. and to work outside London if necessary.—Write, giving details of experience and salary required, to: Crown Works, South Lambeth Road, S.W.8.

EAGRE

AGENTS AND SITE ENGINEERS REQUIRED for various contracts throughout the country. Experience in earthworks, roads, drainage and heavy foundations essential. Knowledge of tracklaying would be advantageous.—Apply, in writing, giving details of age, experience, together with present salary, to:

The Contracts Manager,
EAGRE CONSTRUCTION CO., LTD.,
East Common Lane, Scunthorpe, Lincs.

BUILDING INDUSTRY. — WORK STUDY ENGINEER, aged about 30 years, REQUIRED by building and civil engineering contractors based on Merseyside. Applicants should preferably have had work study experience, but a background in the contracting industry is essential. Consideration may be given to training a suitable applicant in work study. This is a pioneer appointment in this company and considerable tenacity and drive will be needed to implement the work although every help will be given by the parent company where work study is well established. Applications should contain full details of education, training, employment and employers (in confidence), age, and approx. salary required.—Write Box V.1102, "The Contract Journal."

CHIEF BUYER REQUIRED by a large group of civil engineering companies for their group supply department in London. He must be an able administrator and negotiator, 35-40 years of age, with a good engineering background, preferably in the civil engineering industry. A first-class knowledge of stores control is necessary, and membership of the Purchasing Officers' Association would be an advantage. A certain amount of overseas travel will be involved, and the position offers a salary in the range £1,500 to £2,000 p.a., according to age and experience.—Applications in writing, which will be treated in strict confidence, should give brief details of age and career, and be addressed to The Personnel Officer, **THE CEMENTATION CO., LTD.**, 20 Albert Embankment, S.E.11.

APPOINTMENTS VACANT

CIVIL ENGINEERS REQUIRED by expanding and old-established contractors in reinforced and post-tensioned concrete. The company has a drawing office, its own precast works, and executes complete schemes for bridges, culverts, etc. The appointments are permanent and pensionable and are for: (a) for **SENIOR SUPERVISING ENGINEERS** to control several contracts in the South and South-West of England; (b) for young **ENGINEERS** with site experience, for contracts in Liverpool or the South.—Applications, in confidence, should state age, experience, present salary, and employer, to **THE LONDON FERRO-CONCRETE CO., LTD.**, Maxted Road, Hemel Hempstead, Herts.

DESIGNER-DRAUGHTSMAN REQUIRED, minimum qualification H.N.C., with sound engineering background and experience in design of R.C. and structural steelwork.—Apply, in writing, stating age, qualifications, experience and salary required, to: Ref. W.S.U., **PERCY BILTON, LTD.**, Uxbridge Road, Ealing, W.5.

CONTRACT SUPERVISORS REQUIRED by painting contractors in Midlands and London areas. Practical experience of all types of painting work essential.—Write Box V.1114, "The Contract Journal."

CIVIL ENGINEER or QUANTITY SURVEYOR (aged 25-38) REQUIRED for head office administrative duties by civil engineering contractor with offices near Victoria. Duties will embrace progressing manufacture of plant and material for important overseas War Office contracts. The permanent appointment is to Box 872, L.P.E., Romano House, 399/401 Strand, London, W.C.2.

THE CEMENTATION CO., LTD.

Have vacancies in civil engineering construction in the United Kingdom for **ENGINEER/AGENTS** for contracts from approx. £100,000 to £250,000 value. Applicants, 30-35 years of age, and preferably with A.M.I.C.E., must have at least five years in senior positions on major projects or in charge of contracts, with the ability to direct labour, carry out preplanning and execute works to a predetermined programme. The permanent appointments offer good salaries with bonus and allowances. Applications will be treated in strict confidence, and should be addressed to:

The Personnel Officer,
THE CEMENTATION CO., LTD.,
20 Albert Embankment, London, S.E.11.

CUBITTS.—COST SURVEYORS REQUIRED immediately. Must be experienced in measuring completed site works for the purpose of unit costing and assessment of targets. Permanent and pensionable positions with good prospects. Apply in confidence, stating age, experience in detail, and salary required, to Personnel Manager, **HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN), LTD.**, 1 Queen Anne's Gate, London, S.W.1.

WALTER SMITH (CONTRACTORS), LTD., Civil Engineering and Building Contractors, Sevenoaks, Kent, REQUIRE ADDITIONAL STAFF to manage work on small and medium-sized contracts in Kent, Surrey and Sussex. Persons applying for these appointments should be 25-30 years of age and must be able to estimate for, and organise the construction of, all types of road, drive and building work from the inquiry to the final completion. The appointments are permanent and pensionable after a probationary period.—Write in strict confidence, giving full details of experience, and indicate salary required.

FLOORING REPRESENTATIVE/SUPERVISOR REQUIRED for large organisation in Kent area. Experienced in thermoplastic P.V.C. cork, lino, and wood blocks. Able to control labour, and with office experience in estimating, and to organise transport provided.—Write Box V.1065, "The Contract Journal."

MASTIC ASPHALT AND FELT ROOFING SUPERVISOR REQUIRED in Kent area for large organisation. Fully experienced in control of labour, and office routine. Good prospects, superannuation, and transport provided.—Write Box V.1066, "The Contract Journal."

CIVIL ENGINEER

REQUIRED by **RICHARD COSTAIN, LTD.**, for their design office in Persia. Duties will include the design and preparation of drainage, sewerage and road work schemes, specifications, quantities and some estimating. Total remuneration is £300 per annum (no local tax), with bachelor accommodation provided free. Kit allowance £60. Tours of 18 months each, followed by paid leave in the U.K. Candidates, aged 27-37, should be A.M.I.C.E. or A.M.I.Mun.E. and should have at least seven years' practical experience of water supply, drainage, sewerage and road work. Experience of structural and R.C. design desirable.—Please apply to:

Overseas Personnel Officer,
RICHARD COSTAIN, LTD.,
111 Westminster Bridge Road, London, S.E.1.

ASSISTANT ESTIMATOR REQUIRED for small works department of large London contractors. Accuracy and speed in taking-off from drawings and specifications (up to £20,000) essential.—Write, giving details of experience and salary required, to Box 838, Dixons, 11 Hills Place, Oxford Street, London, W.1.

CUBITTS offer exceptional opportunities to **WORK STUDY OFFICERS**. Applicants, who should preferably have had training and experience in the building and civil engineering industry, will be required initially for methods planning and recording on sites. Senior positions exist within the organisation which will be filled from successful applicants who prove worthy of promotion. Please write to **HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN), LTD.**, 1 Queen Anne's Gate, London, S.W.1, or telephone Mr Todd, Whitehall 3111, for an application form.

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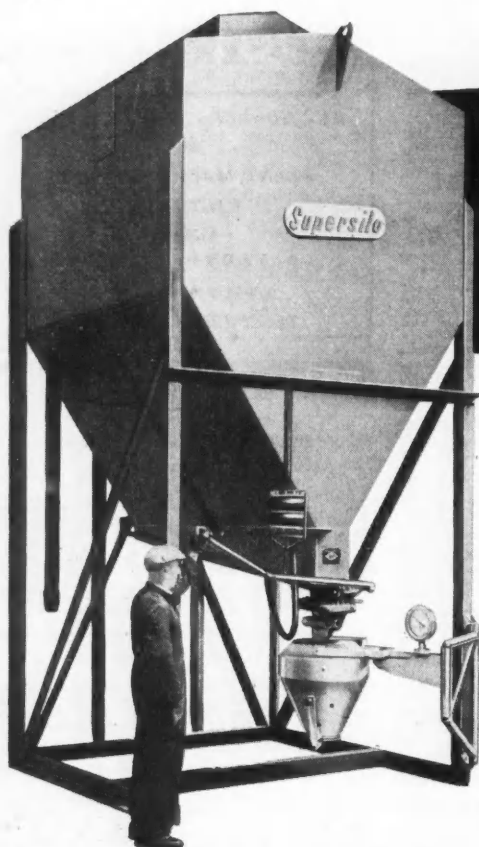
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SOUTH CARDIGANSHIRE WATER BOARD.

CONTRACT NO. 13.

MYNYDD BACH SERVICE RESERVOIR.

TENDERS are invited from experienced contractors for the CONSTRUCTION of a REINFORCED CONCRETE COVERED SERVICE RESERVOIR with EARTHEN EMBANKMENTS to contain 500,000 gallons, ACCESS ROAD thereto, and other ancillary works in connection therewith, at PENUWCH, about 6 miles west of Tregaron and 8 miles east of Aberystwyth. Copies of the Specification, Bill of Quantities and Form of Tender may be obtained from the Engineers, Messrs. ROFE AND RAFFETY, 9 Brewer's Green, Buckingham Gate, London, S.W.1, upon payment (by cheque only) of Two Guineas deposit, which will be repaid upon the receipt of a bona-fide Tender and the return of all documents and Drawings supplied.

The Contract Drawings may be inspected at the Office of the Engineer to the Board, 36 Alban Square, Aberystwyth, Cardiganshire.

Prints of any of the Contract Drawings (three in number) will be supplied by the Engineers on receipt of an application by intending contractors, accompanied by payment of 2s. 6d. per print, and undertaking to return same. Such payment will not be returnable, and must not be included in the Two Guineas deposit.

Tenders, in plain sealed envelope, endorsed "Tender for Contract No. 13," to be sent to the undersigned not later than **FRIDAY, 26th February, 1960**, at 10.00 a.m. The Board does not bind itself to accept the lowest or any Tender.

County Office, J. E. R. CARSON, Clerk to the Board.
Marine Terrace, Aberystwyth, Cardiganshire.

JOHN MORGAN (BUILDERS), LTD., have vacancies for SENIOR QUANTITY SURVEYORS in the South Wales area. Good prospects, pension scheme.—Apply, giving full particulars, to 14 Cathedral Road, Cardiff.

MANAGER REQUIRED by long-established company to take charge of concrete building development. Applicants must be experienced in modern design and production methods. Generous salary according to experience with opportunity for future advancement. All applications will be treated in confidence. A. J. MACKANESS, LTD., Ransome Rd., Northampton.

ESTIMATOR/SURVEYOR, who will also be Assistant Manager, REQUIRED by progressive Mid-Sussex firm of builders specialising in property maintenance and building contracts, with outside staff of 30. Age 25-40; L.I.O.B. preferred but not essential. Permanent post for energetic man with sound knowledge of construction and ability to prepare plans of alterations and conversions. Should be able to drive. Apply, stating age, experience, and salary required, to the Directors, KAYE JONES, LTD., Burgess Hill, Sussex.

JUNIOR SITE ENGINEERS REQUIRED by a firm of civil engineering contractors operating in the North of England; duties including setting, measurement, records, etc. Good salary and prospects offered to energetic young men.—Write Box V.1076, "The Contract Journal."

UNILEVER, LTD. REQUIRE a temporary BUILDING INSPECTOR for site supervision of a large project in London, comprising steel and reinforced concrete construction of 12 storeys; 12 to 2 years. Salary range £1,500-£1,600 per annum. Experience in measurement and contractors' accounts essential.—Applications, giving full details and qualifications, experience, career to date, and present remuneration, to be addressed to Head Office Staff Department (WF49), UNILEVER, LTD., Unilever House, Blackfriars, London, E.C.4.

QUANTITY SURVEYOR REQUIRED for building construction involving all trades. Huddersfield office.—Write Box V.1081, "The Contract Journal."

CONTRACTS MANAGER/SUPERVISOR REQUIRED by well-known old-established company of building and civil engineering contractors in the South-West. Applicants, possessing previous experience, should be capable of organising and controlling a number of contracts concurrently and should be well acquainted with modern building methods and plant, replanning and cost control. Preference age 30 to 45. The salary will be commensurate with experience. The position is permanent and pensionable. Car provided. Reply in confidence, giving age and details of previous experience, to Box V.1080, "The Contract Journal."

WORKS MANAGER REQUIRED for established precast concrete works in West Midlands. Good salary and prospects. Experience and first-class references essential.—Write Box V.1103, "The Contract Journal."

SENIOR SURVEYOR or SENIOR ESTIMATOR REQUIRED. Manchester building and civil engineering contractor. Capable of controlling department or able to take full responsibility large contracts from estimate to final account. Salary £1,000/£1,400 plus bonus, etc., etc. Excellent prospects with financially sound company.—State age, full particulars, in confidence, to Box V.1120, "The Contract Journal."

ROBERT M. DOUGLAS (CONTRACTORS), LTD. REQUIRE SECTION ENGINEERS, SETTING-OUT ENGINEERS and SOILS ENGINEERS for work, including motorways and general civil engineering, in any part of the country.—Apply in writing, stating age, experience, qualifications and salary required, to 395 George Road, Birmingham, 23.

TECHNICAL WRITER (Male).—An opening is available with a Newcastle upon Tyne engineering firm for a TECHNICAL WRITER for the compiling of workshop manuals and operators' handbooks. Preference will be given to a person with automobile or similar engineering experience, and the position may appeal to a Draughtsman with ability to express himself in clear and concise English. Applicants should give full details of age, education, and previous employment record, and give an indication of present salary or salary expected.—Write Box V.1107, "The Contract Journal."

LARGE London firm of foundation contractors REQUIRE DEPUTY to QUANTITY SURVEYOR. Must be capable of measuring reinforced concrete work from drawings on for interior and final accounts; also control costings of contracts. Good salary and prospects.—Write, stating age and experience, to Box V.1104, "The Contract Journal."

SUB-AGENT/ENGINEER REQUIRED to organise and supervise production of heavy precast concrete bridge units at depot in North London. Specialist experience in design of operations required, together with general contracting experience.—Write to Box V.1094, "The Contract Journal," quoting Ref. DEF/2.

CLACTON URBAN DISTRICT COUNCIL.

WESTERN AREA DRAINAGE—SEA OUTFALL.

CONTRACT NO. 7.

The Council invite TENDERS for the CONSTRUCTION of the FOLLOWING WORKS:—
(a) 36in. dia. Cast- and Spun-iron Outfall Sewer, of which some 5,000ft. will be laid in trench inshore and some 2,000ft. will be laid across the foreshore and in the sea bed, also in trench.
(b) Extension of a 51in. dia. Steel Outfall Sewer some 230ft. The outfall will be laid in trench, and the work extends from a point near the low water mark.

The contract also includes for the Removal and Disposal of an existing 12in. dia. Outfall Sewer consisting partly of stoneware pipes surrounded by concrete and partly of cast-iron pipes supported on cast-iron piles. Copies of the Specification, Bill of Quantities prepared by the Council's Consulting Engineers, Messrs. JOHN TAYLOR AND SONS, Artillery House, Artillery Road, Westminster, S.W.1, and Form of Tender may be obtained from the Offices of the Consulting Engineers on payment of £5 (cheque only, payable to Clacton Urban District Council), which will be returned upon receipt of a bona-fide Tender, not subsequently withdrawn.

The Drawings may be inspected at the Offices of the Consulting Engineers and also at the Office of the Council's Engineer and Surveyor, Town Hall, Clacton-on-Sea. Tenders, in plain sealed envelopes, endorsed "Western Area Drainage—Contract No. 7," are to be delivered to the Clerk of the Council at the Town Hall, Clacton-on-Sea, on or before Noon on **MONDAY, 29th February, 1960**.

The Council do not bind themselves to accept the lowest or any Tender.

Town Hall, Clacton-on-Sea, Essex. C. B. HEARN, Clerk of the Council.

ENGINEER/AGENT REQUIRED to run medium-sized contracts in Kent area. Ability to organise rapid production with quality control. Pension scheme. Excellent prospects for senior position.—Apply HUGH BROWN (ENGINEERS), LTD., Chart Road, Ashford, Kent.

SALESMAN, Industrial Equipment, for sales of diggers, dumpers, tractors, etc. Must be fully knowledgeable. Excellent opportunity and pay in heart of the Industrial Midlands. Housing available if required. Apply in writing, giving full details of experience, sales record and remuneration, to A. Alyward, Manager, BRISTOL STREET MOTORS, Alcester Road, Wythall, near Birmingham.

CONTRACTORS' SITE CASHIER. Must be fully experienced. Carlisle area. Expenses paid for those selected for interviews, Manchester.—Write Box V.1111, "The Contract Journal."

FIRST-CLASS PUBLIC WORKS FITTERS and WELDERS REQUIRED. Apply in writing to A. DAVIES (MIDLANDS), LTD., Streetway Depot, Leacroft Lane, Cannock, Staffs.

AGENTS REQUIRED for trunk road and sewerage contracts. Progressive situations with top remuneration for experienced men of proven ability. COSTELLOE AND KEMPLE, LTD., Cheltenham.

ENGINEERS REQUIRED for trunk road and sewerage contracts. Progressive situations with top remuneration for experienced men of proven ability. COSTELLOE AND KEMPLE, LTD., Cheltenham.

AREA MANAGER REQUIRED for supervision of housing sites in South Wales area. Bonus scheme and car provided if required. Superannuation after trial period. Company operates from Bristol and applicants need not necessarily reside in South Wales. Full details to General Manager, Box V.1112, "The Contract Journal."

TARMACADAM surfacing contractors in Great London area REQUIRE good FOREMEN LAYERS. Rate up to £13 10s. per week. Overtime only when instructed, but bonus on results up to £12 per month. — Write to Box V.1113, "The Contract Journal."

ASSISTANT to contracts manager REQUIRED by progressive civil engineering contractors working in the Bedfordshire and Hertfordshire area. Excellent opportunity for right man, preferably between 25-35 years.—Please write, stating age, experience, to Box V.1115, "The Contract Journal."

YOUNG MAN REQUIRED, civil engineering training, to commence as Site Engineer, with a view to promotion to Assistant Contracts Manager, Luton area.—State age and experience to Box V.1116, "The Contract Journal."

TIMEKEEPER/CLERK REQUIRED for civil engineering contract in Walthamstow. Good salary for competent, industrious man.—Apply R. G. HORTON (ENGINEERS), LTD., Sinnott Road, London, E.17.

ROBERT M. DOUGLAS (CONTRACTORS), LTD. Quantity Surveying Department.—QUANTITY SURVEYORS REQUIRED for work in Great Britain, with at least three years' experience of final accounts for civil engineering and building works of £100,000 and above. Excellent prospects for men of initiative and ability. Remuneration by arrangement. Pension scheme. Write, giving details of age, education, experience, and salary, to 395 George Road, Edlington, Birmingham, 23.

FULLY experienced COSTING CLERK REQUIRED for Watford builders office. Good salary and conditions for capable and energetic man.—Write Box V.1086, "The Contract Journal."

ASSISTANT SURVEYORS REQUIRED for large contracts in London. Good salary and expenses.—Apply to Dept. WK, 26 Victoria Street, London, S.W.1.

W. AND C. FRENCH, LTD., urgently REQUIRE CIVIL ENGINEER for railway modernisation contracts with experience in preparation of drawings, studying work construction, and preparing record drawings of work as constructed.—Apply in writing, stating age, experience, and salary required, to Personnel Manager, 50 Epping New Road, Buckhurst Hill, Essex.

W. AND C. FRENCH, LTD., urgently REQUIRE JUNIOR DRAUGHTSMAN for site office, railway modernisation contract, capable of preparing drawings to details supplied.—Apply in writing, stating age, experience and salary required, to Personnel Manager, 50 Epping New Road, Buckhurst Hill, Essex.

JOHN MORGAN (BUILDERS), LTD., have a vacancy for a SENIOR CIVIL ENGINEER for the South Wales area. Also JUNIOR ENGINEERS REQUIRED. Pension scheme. Good prospects.—Apply 14 Cathedral Road, Cardiff.

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD.

ERECTION OF ADMISSION WARDS AT ST. BERNARD'S HOSPITAL, SOUTHALL, MIDDLESEX.

Building contractors wishing to TENDER for the ABOVE WORK are invited to submit their names for inclusion on a selected list of tenderers. The buildings will be single-storey brick construction with pitched tiled roofs, and will consist of four separate wards linked by an existing covered way, together with a kitchen block. The estimated cost is approx. £130,000. The Architects responsible to the Board for this work are Messrs. Tooley and Foster, Midland Bank Chambers, Buckhurst Hill, Essex, and the work will be carried out under their supervision.

It is anticipated that invitations to tender will be issued about mid-March 1960, and that work on the site will commence in May, 1960.

Applications, together with details of works carried out and their value, should reach the Regional Architect, NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD, 40 Eastbourne Terrace, W.2, not later than **FRIDAY, 19th February, 1960**.

TWO CONTRACTS MANAGERS REQUIRED.

REQUIRED by North-West building and civil engineering company, one to specialise on large buildings and the other on medium-sized civil engineering contracts. Salary £1,250/£1,500 plus bonus. Car provided. Assistance with housing if required. Work usually within 30 miles radius of office. Age and full particulars in confidence to Box V.1117, "The Contract Journal."

HUSSEY, EGAN AND PICKMERE, LTD., have vacancies for SUB-AGENTS and SETTING-OUT ENGINEERS on civil engineering contracts in England and Wales. Previous experience essential.—Apply to Head Office, 24 Calthorpe Road, Edgbaston, Birmingham, 15, giving details of previous experience and stating age and salary required.

SENIOR QUANTITY SURVEYOR REQUIRED for head office appointment. Applicants must have extensive experience in civil engineering construction work. Salary commensurate with experience. Bonus and superannuation scheme in operation.—Applications should be addressed to Personnel Officer, TARMAC CIVIL ENGINEERING, LTD., Ebbingshall, Wolverhampton.

YOUNG MAN REQUIRED as ASSISTANT for busy plant hire and sales office, Victoria Street, Good salary and prospects. Knowledge of contractors' plant an advantage but not essential.—Write, giving full details, to Box V.1091, "The Contract Journal."

SITE SECTION ENGINEER REQUIRED for large dry dock construction on north-east coast. Age 25-30. Preferably experience of marine works and civil engineering qualifications. Excellent prospects both at home and abroad.—Write to Box V.1095, "The Contract Journal," quoting reference KLM/7.

WALTER SMITH (CONTRACTORS), LTD.

Sevenoaks, Kent. REQUIRE ASSISTANT ESTIMATOR for small- and medium-sized road, sewer and civil engineering work. Age 25-35. Permanent responsible appointment after probationary period.—Write, giving full details of experience, age, salary required, Box V.1098, "The Contract Journal."

QUALIFIED CIVIL ENGINEER, with wide background of contracting experience, for small progressive expanding company. Must have proved record of work completed to programme at right cost. To be responsible for estimating, pricing, programming and negotiation of medium-sized contracts. Salary based on results. Car provided. — Write, giving full details, to Box V.1096, "The Contract Journal."

ESTIMATOR urgently REQUIRED, capable of working on own initiative, preferably with experience of road, railway, water sewer and sewerage works for company in North Staffordshire. Good prospects to capable man.—Write Box V.1097, "The Contract Journal."

LANDSCAPE contractor REQUIRES

WORKING ASSISTANT this spring, with drive and initiative, for work connected with sportsfields, swimming pools, housing estates, etc.—Write, giving full particulars of experience and wages required, to Box V.1088, "The Contract Journal."

SENIOR ESTIMATOR REQUIRED for contractors' branch office. Considerable previous experience in civil engineering essential. Permanent progressive post to satisfactory applicant, and participation in superannuation scheme.—Submit complete details of previous employers with application to Box V.1088, "The Contract Journal."

DESIGN ENGINEER WANTED for Victoria head office of civil engineering contractor. Should be a qualified civil engineer with site and design office experience, and interested in mechanical engineering. Reply to Box V.1087, "The Contract Journal," quoting Ref. ABC/8.

GENERAL FOREMEN REQUIRED for civil engineering contracts in Berkshire and Essex. Apply giving full details of age, experience, etc., to HADSPHALTIC CONSTRUCTION CO., LTD., Johnston House, Hatchlands Road, Redhill, Surrey.

SITE ENGINEERS REQUIRED for contracts in Home Counties and West Midlands. Must be fully experienced in setting-out, measuring and preparing interim certificates.—Write to HADSPHALTIC CONSTRUCTION CO., LTD., Johnston House, Hatchlands Road, Redhill, Surrey.

SUB-AGENTS and ENGINEERS REQUIRED for general civil engineering work in various parts of the country.—Write, stating age, and giving full details of experience and salary required, to Box V.1092, "The Contract Journal."

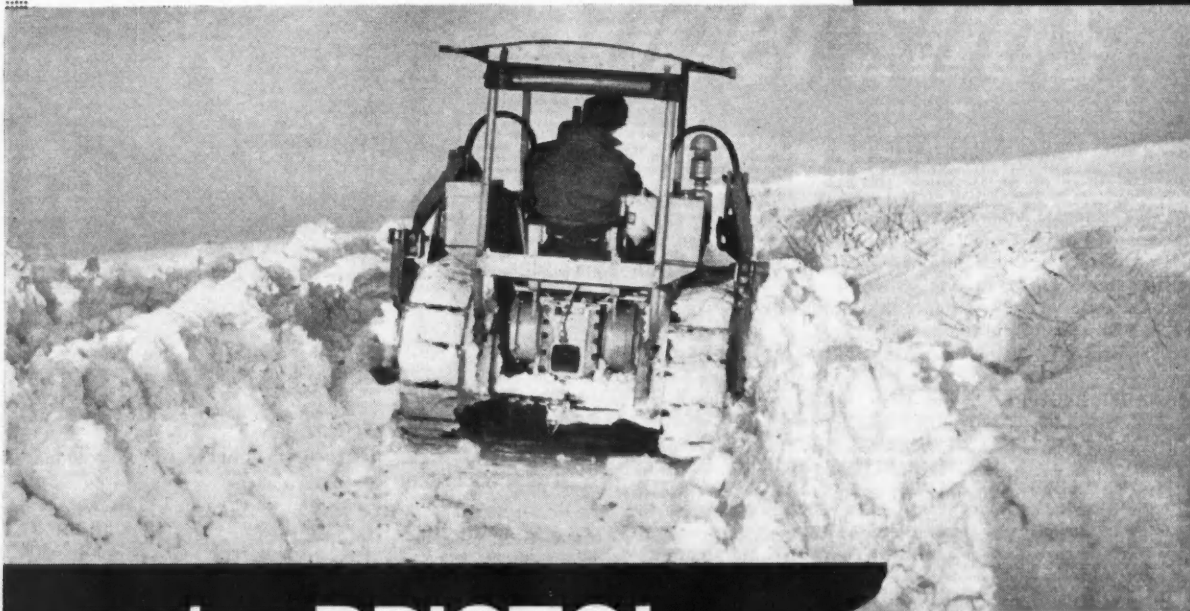
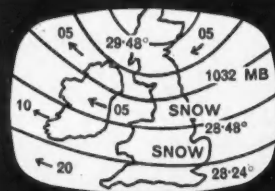
BUILDING AGENTS/GENERAL FORE-

MAN holding building or civil engineering qualifications are asked to submit details for consideration. Contracts are mainly in the Midlands area. Superannuation and other amenities available, plus attractive salaries. Write, with full details of previous experience, to Box V.1090, "The Contract Journal."

QUANTITY SURVEYORS REQUIRED by major firm of civil engineering and building contractors. Applicants should be capable of dealing with all aspects of final account to completion. Permanent appointments with good salary and conditions and entry into superannuation scheme arranged after 12 months.—Write, giving full details of training and experience, which will be treated in the strictest confidence, to THE MITCHELL CONSTRUCTION CO., LTD., Wharf Works, Peterborough, Northants.

WANTED by small contractor, 10-ton Diesel ROLLER; also good Dinkum DIGGER. No fancy prices, please.—Full details: D. S. O'BRIEN AND CO., Olive Mount, Birkenhead, Cheshire.

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THE CONTRACT JOURNAL

INCORPORATING
THE BRITISH CONSTRUCTIONAL ENGINEER AND THE CONTRACTOR

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Advertisements

Advertisement rates may be obtained on application to R. Binfield, Advertisement Manager.

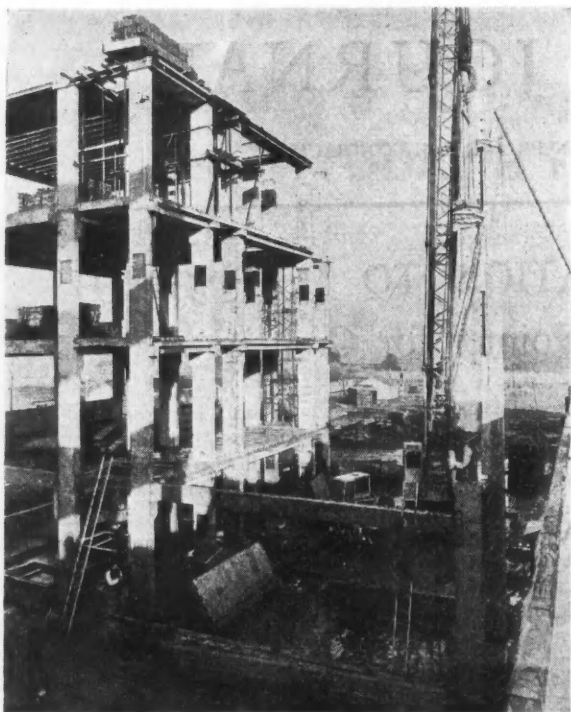
MIGRATION TO THE SOUTH A Pointer for Contractors

THERE is still a recognisable trend of population away from depressed Scotland, the North and Wales to the prosperous Midlands and South; the past decade has, in fact, seen a marked change in the pattern of employment. This phenomenon is, of course, not new. In the inter-war years, the "southward trend" of industry and population was essentially a process of adaptation to changing forces in the economic sphere. There were then movements of population out of the older industrial areas into the developing centres of the newer industries. That it has not been halted, despite the incidence of general full employment and planning, is clear from a recent *Treasury Bulletin for Industry*. Contractors could do worse than note the details, since population movements and building orders frequently go hand in hand.

In the seven years 1951 to 1958, the total number of movements from one region to another averaged 443,000 a year. Most of the migrants were between 20 and 45 years old. The London and South-Eastern, Eastern and Southern regions, taken together, showed a net gain of 92,000 men from migration (equal to 2 per cent. of all male employees in 1951) and 71,000 women (3 per cent.). The two Midlands regions gained 15,000 men, but lost a similar number of women. All other regions lost both men and women through migration, Scotland and Wales most markedly. In Scotland, there was a net loss through migration of 37,000 men and 17,000 women; in Wales there was a loss of 18,000 men and 12,000 women. This is not, of course, the complete picture. The total number of employees in Great Britain increased by just over 7½ per cent. between mid-1948 and mid-1958. In general, this growth followed the migration pattern; it was slowest in Wales, Scotland and the northern part of England, and fastest in the Eastern and Southern region and in the South-West. About a third of the total increase was in London and the South-East; another fifth was in the two Midlands regions.

It seems unlikely that these trends will be halted yet awhile. It is true that the Government is trying to attract a diversity of industries to set up factories in the depressed areas. The motor industry is a case in point. It is not only one of the most dynamic of our major industries, but it is heavily concentrated in precisely those parts of the country where the labour shortage and the congestion of population and traffic tend to be greatest. It appears to be an obvious candidate for dispersal. But the motor industry is highly complex and integrated, and it is not surprising that there has been considerable resistance to the Government's overtures, although in recent days one manufacturer has announced a scheme which fits into the Government's plans. Inducing the motor firms with big expansion schemes to set up entirely new factories in Scotland rather than extend their existing ones in well-tryed areas is not an easy matter. The same applies to other industries. It may be that the question is more political than economic; but this is where politics and economics can diverge quite sharply.

This is not to say that the problem should not be or cannot be tackled. The broad distribution of industries and population in Great Britain was determined long ago by world forces, and by the early development here of certain advanced manufacturing techniques based mainly upon coal. It can still be argued that there has been a failure to adapt this structure fast enough to changes in the techniques of production, and in the character of home and foreign demand. And on the grounds of immediate expediency it seems desirable that the Government should be successful in persuading expanding firms to go to the areas of labour surplus. Inevitably, this must take time, and meanwhile the increased numbers already settling in the South will require houses, shops and schools, and all the other amenities that the contracting industry provides. An industry so versatile as contracting has a number of advantages when it comes to adapting itself to changing circumstances.

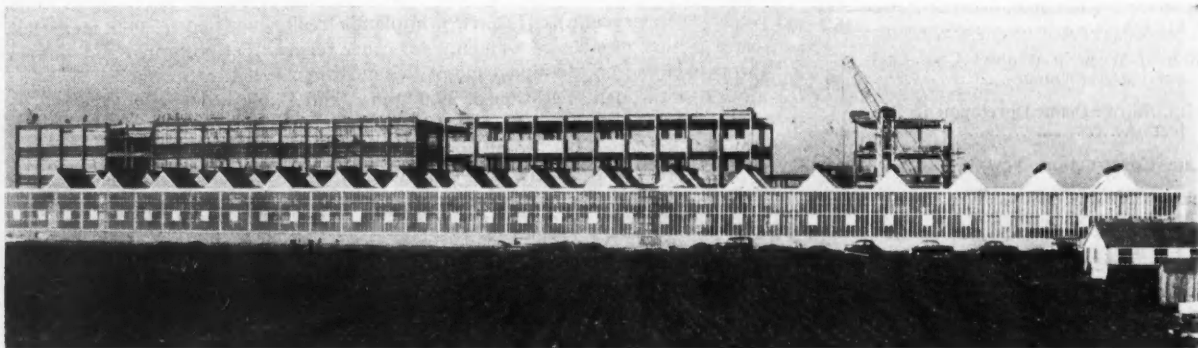


Erection of precast concrete column for Small Scale Research Laboratory

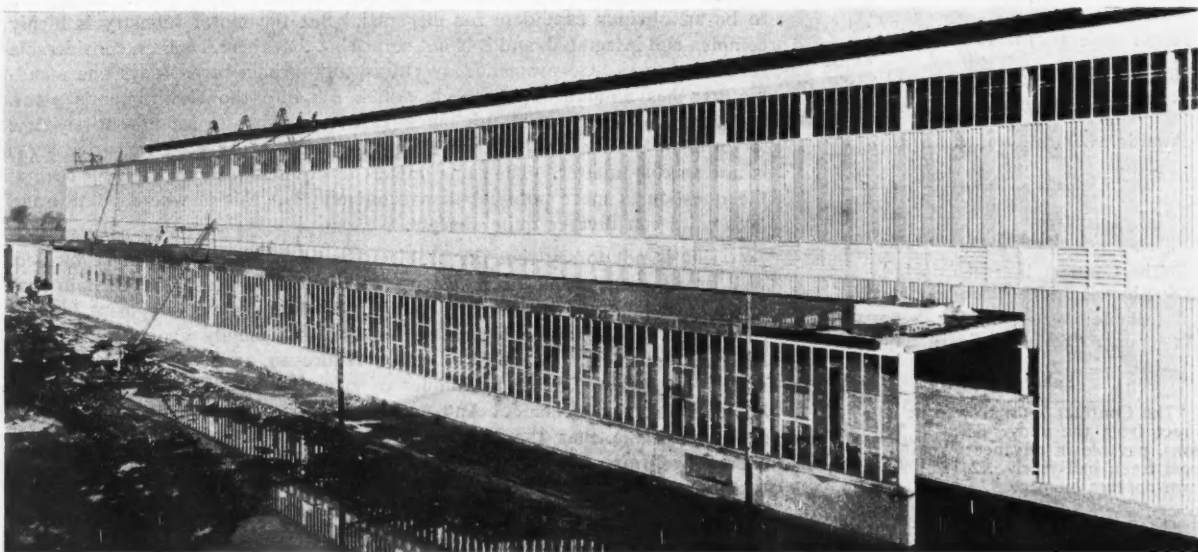
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Consultants:
Courtaulds Technical Services, Ltd.

Contractors:
Holland & Hannen and Cubitts
(North-West), Ltd.



East elevation of Small and Medium Scale Research Buildings



South elevation of Large Scale Research Building

£2M. GLASS RESEARCH CENTRE

Prototype Room Cuts Time, Saves Money

THE laboratories now being built at Lathom Park, near Ormskirk, Lancashire, for Pilkington Brothers, Ltd., at a cost of £2m. will, it is believed, form the largest glass research centre in the world.

Different types of laboratory accommodation are being provided to suit the scale of the work. These comprise a laboratory for small-scale experiments, a laboratory for medium-scale work and a laboratory for work on a very large scale. Other buildings include a radio chemical building, a workshop and stores block, a lecture theatre for 150 people and a canteen seating 500. A sewage treatment works and a car parking area covering 9,000 sq. yd. are also included in the project.

Work started on the site on January 1, 1959, and is due to be completed this June. Progress has been accelerated by building a prototype laboratory bay room at Pilkington's headquarters in St. Helens where the ideas to be incorporated into the Small Scale Research Laboratory have been tried out. These included the service routes, lighting, design of doors, colour schemes, black-out blinds and many other details. In this way, final designs were reached and approved on a practical basis before work commenced on the site and this procedure has already saved a considerable amount of time and money.

Site

The site is situated in a rural area which is relatively free from atmospheric pollution—an important consideration where research of the type to be undertaken is concerned. The grounds cover about 160 acres of which approximately one third is being used for the present building programme, and the rural atmosphere is being preserved by the planting of trees and grass around the buildings. The remains of the historic Lathom House will in due course be demolished but its gardens will probably be reinstated to provide amenities for the 500 members of the staff of whom, incidentally, 150 will be graduates.

Flexibility of laboratory space and easy

access to services for future expansion were two factors given high priority in the design of the buildings. The basic module used in the design of all the buildings is an area 3ft. 4in. by 3ft. 4in.

The Small Scale Research Laboratory is a four-storey building about 450ft. long and 65ft. wide. The floor areas are divided into bays measuring 13ft. 4in. by 26ft. 8in. The individual laboratories may consist of two, three, four or five bays.

Services Feature

Each bay is provided with six service outlets distributed in such a way that it will be possible to connect to electricity, gas, water and drainage within 6ft. of any point in the building. A horizontal service duct 7ft. wide, 8ft. high, runs the length of the building below ground level and the services are distributed to the floors above in ducts which rise vertically to roof level; these are 5ft. by 2ft. in section and are accessible on both sides of every corridor at intervals of 26ft. 8in. Services are taken to the outlets along well defined routes above the suspended ceilings. The provision made for maintenance and future extension of any service is of a very much higher standard than that normally associated with laboratories.

The Medium Scale Research Laboratory is a single-storey building adjoining the Small Scale Research Laboratory. The area is 35,000 sq. ft. with a headroom of 20ft. Main services are situated in a tunnel 470ft. long, 7ft. wide and 5ft. high, below floor level, and supplies can be brought up at selected points, 13ft. 4in. apart on both sides of a central gangway for connection to apparatus as required.

The Large Scale Research Laboratory is 450ft. long, 80ft. wide and will provide very large working areas with a headroom of 40ft. In this building the main services run along the walls at an average height of 15ft.

Full use has been made of the firm's products with considerable effect—single and double glazing units, mureglass cladding, Vitrolite cladding and fibreglass insulation.

The Small Scale Research Laboratory is

constructed from precast concrete units. The Medium and Large Scale Research Laboratories are steel-framed buildings.

Consultants and Contractors

One of the features of the planning of the laboratories has been the influence the Research Department, under the direction of Mr. W. J. R. Merren, director of research, has exercised in their design and layout. Working in close co-operation with the company's central engineering and planning department has been Mr. J. W. Nightingale, a laboratory design expert, who was previously with the Nuffield Foundation investigating the special problems of this new field of design.

The architects and consulting engineers are Courtauld's Technical Services, Ltd., of Coventry, and the contractors, Holland & Hannen and Cubitts (North West), Ltd., of whom Mr. J. J. Evans is construction director and Mr. Gerard Edey, site agent.

CONTRACTORS PLANT ENGINEERS' LONDON DINNER

The third annual dinner of the London branch of the Contractors Mechanical Plant Engineers was held recently at the Criterion Restaurant, London, and, as on previous occasions, proved to be a most enjoyable function.

Lt.-Col. A. C. Newman, V.C., O.B.E., was a very popular guest of honour and his scintillating speech was well received by the 250 or more members and guests present. On a serious note he said there was difficulty in the construction industry in getting the right man to look after plant, and he appealed to members to help the youngsters in the plant shops.

The guests were welcomed by Mr. R. Russell, chairman, who referred to the recent formation of a national committee and the interest being shown in the association in France and Holland.

The toast of "The Ladies" was proposed by Mr. C. E. Hilditch, honorary social secretary, in a manner well befitting the occasion.



Interior view of Large Scale Research Building

John Sumner's Notebook . . .

FOR some time now I have been gathering together, or trying to gather together, information on the pupilship and studentship schemes operating in the different sections of the industry. The job has been rather a difficult one, but recently it has been made much easier through the L.M.B.A.'s publication of a memorandum on the services of its Board of Administration for the Pupilship and Studentship Schemes.

The memorandum is in "question-and-answer" form and is intended to help those members who may not be fully aware of the services given by the Board. It will do that all right, for it contains much information which I have been unable to acquire after spending a great deal more time on the quest than I imagine many L.M.B.A. members would be prepared or able to devote.

It explains the difference between the indentured student and the articulated pupil, the courses of technical training, the entrance qualifications, the employer's responsibilities and, finally, there is a section devoted to pay. Here minimum scales are given, and they show, for articulated pupils, a range from £200 in the first year to £350 in the fourth year; for indentured students—who are industry-based—a weekly scale is given, starting at £3 a week in the first year and going up to £7 a week in the fifth year. Some may think these scales somewhat low and scarcely comparable with apprentices' rates. But they are minimum scales.

Disappointingly the memorandum makes no mention of students' or pupils' salaries after completion of their studies. True, they may, and probably do, vary widely between one firm and another, but one would have thought that approximate figures could be given, according to the size of firms. After all, a young man wants to know something about what he is likely to be earning when his training is finished and he has two or three years' full-time industrial experience behind him. He may be difficult to recruit otherwise, for there are plenty of industries which do give this information.

Perhaps I should add that quite a few London firms run their own training schemes. The L.M.B.A. schemes are intended primarily for those firms which have no such arrangements, or the facilities for providing them. It is to be hoped that the firms in this category who hitherto have neglected to train their future management personnel will study the memorandum carefully and invest in the L.M.B.A.'s soundly devised plan for the future.

IT is always of interest to me to learn who will be responding for the guests at the annual dinner of the N.F.B.T.E. This event is generally reckoned by my friends and colleagues to be the highlight of the industry's "dinner season," and I can recall several speeches of past years which have been among the best it has been my pleasure to report. Some of those who have replied for the guests on former occasions will doubtless be at Grosvenor House on February 2 when, I gather, Sir Harry Pilkington will be entrusted with the task. Apart from being a governor of the Bank of England he is president of the National Council of Building Materials Producers, whose members' well-being is inextricably linked with that of the construction side of the industry. It may be that this will tempt Sir Harry to add his plea to that already made by the builders that the Government (who will be represented at the dinner by Lord John Hope, the Minister of Works) should avoid

measures which bring about uncomfortable fluctuations in the size of the building programme. If it does, I suppose his builder hosts, whose minds are still preoccupied with shortages of bricks, will not be unhappy.

However, as serious speeches on this occasion are rarely popular, I imagine the reference would be but a passing one, sandwiched snugly between layers of the wit and good humour which Sir Harry always seems to have at his command.

SIR BRUCE WYCHERLEY has defended the building societies against those who hold that the movement is one of the major stumbling blocks to progress in the design of new houses. As managing director of the Abbey National Building Society, Sir Bruce is as competent as any to undertake this task, and he told the Insurance Institute of London the other day that he found suggestions that building societies were a drag upon good design "most distasteful."

I seem to remember that Mr. J. R. Millican, of the Building Societies Association, and some of his colleagues had to deal with similar criticisms at a house-builders' conference in London just over a year ago. Like Sir Bruce, they gave assurances that the building societies have never been unwilling to entertain new propositions, including novel design, materials and construction. My recollection is that they were also with Sir Bruce in expressing unwillingness to finance "eccentricities." It can be appreciated that the building societies are justified in considering their investors' interests first, and as Sir Bruce said last week, they have no more duty to lead design than insurance companies have to manage the companies in which their life funds are invested.

Most people would agree with this, but I think we ought to be quite sure in our minds what we mean by the building societies. I, for one, am fairly certain that the officers and their headquarters staffs are as progressively minded when it comes to the design and appearance of houses as anyone at 66 Portland Place or 36 Bedford Square. But in the ultimate, they are not the arbiters. This role is assumed by the building societies' surveyors who inspect properties to establish their loan-worthiness. They err, as one might expect them to do, on the side of safety. And safety to them means ability to sell readily if the property comes on the market again.

This aspect of the matter may still be overlooked by Sir Bruce and others in the hierarchy of the building society movement. Until it is looked into it seems to me that the building societies are bound to be criticised from time to time for their intransigence in design matters.

Perhaps all the foregoing is less important than another piece of information which Sir Bruce imparted to the Insurance Institute. It was this. Contrary to anything which might be inferred from recent events, building societies—or at least the vast majority of them—confine their lending almost exclusively to owner-occupier borrowers.

THERE will be many in Crawley New Town who will experience sincere regret at Sir Thomas Bennett's decision to resign from the chairmanship of the Development Corporation. Over the past 12 years he has been something more than the chief administrator of an enormous construction project. He has accepted and discharged in admirable fashion an even bigger public relations job. When Sir

Thomas and his staff started in Crawley there was a certain amount of negativity, if not resentment, at the whole idea of a new town. In a matter of weeks, if not days, Sir Thomas dissolved this feeling and welded the existing organisations and community facilities into a highly efficient machine ready to receive the influx of new residents from London and other overcrowded centres. When the new people arrived, fresh difficulties and problems arose, but by then local confidence in Sir Thomas and his Corporation was so great that solutions were quickly found.

I very much doubt whether any one man in the past has had the experience and the sense of satisfaction that goes with it of being the guiding light in the building and peopling of a new town and living to see the job virtually finished and in successful operation. This has been Sir Thomas's good fortune.

It is a far cry from the days when Sir Thomas was a tutor at the Northern Polytechnic in London. Since then the building industry has come to recognise his unusual qualities as an architect, as an administrator and a true friend of the building industry. Why he has never been accorded the honour of being President of the R.I.B.A. remains one of the mysteries of the century.

CONTRARY to the impression left by my note of a fortnight ago, Sir Richard Coppock is not associated with the National Federation of Building Trades Employers. I am almost tempted to think that it is rather superfluous to point this out, for since my note appeared he and his trade union colleagues have been locked in battle with the building employers over the claim for a wage increase. From the information I have on the course of events at the meeting of the National Joint Council, Sir Richard left very little doubt as to where his allegiance lies. I still cannot help feeling, however, that if Sir Richard were at the head of the N.F.B.T.E. many would find it an amusing exercise to speculate on the possibilities.

EASTERN BUILDERS OFFICERS ELECTED FOR 1960

The annual general meeting of the Eastern Federation of Building Trades Employers was held at Cambridge recently when the following officers were elected for 1960:

President—D. M. Chaston, F.I.O.B., (David Chaston, Ltd., Hoddesdon); senior vice-president—C. E. Wadley, (Hutton (Builders), Ltd., Colchester); junior vice-presidents—L. B. Sell (H. C. Jones, Ltd., Luton); S. G. Johnson, J.P., F.I.O.B., (S. F. Johnson and Co., Leigh-on-Sea); J. Durston, Brentwood; hon. treasurer—B. T. Henman, J.P., F.I.O.B. (T. and E. Neville, Ltd., Luton).

The national president, Mr. T. V. Prosser, addressed the meeting, making particular reference to the greatly improved economic position and its undoubted effect on the building industry in 1960.

Presenting his review for 1959, the retiring regional president, Mr. C. C. Wiggins, F.I.O.B., referred to the fact that his members prided themselves on the Eastern Federation which they had built up by their own efforts and resources into a first-class organisation.

"In East Anglia," said Mr. Wiggins, "we tend to show a little more independence than others and this independence we shall strive to preserve. We feel we know best the problems of our own members and how to meet them. In so doing we have developed our own characteristics and this has tended to give colour and vitality to our organisation which we would not willingly lose."

A lively discussion took place on the review when the following matters were considered: Shortage of land for housing; apprenticeship and; shortage of bricks.

Concluded from Previous Issue

PRESTRESSED CONCRETE BRIDGES

In this issue, we conclude the exclusive report on the important meeting on prestressed concrete bridges held in London on January 14. The meeting was arranged by the Prestressed Concrete Development Group and held at the Institution of Civil Engineers

RESEARCH ON PRESTRESSED CONCRETE BRIDGES

MR. R. E. ROWE, M.A., A.M.I.C.E., head of the structural department of the Research Division of the Cement and Concrete Association, discussed research carried out at three specific centres—the C. and C.A., the University of Illinois and the Portland Cement Association of America. These organisations, he said, had turned out a fairly extensive series of research studies aimed at helping practising engineers to solve problems which they themselves had posed from time to time, and sometimes had solved problems the engineers had not posed.

First, the work of the C. and C.A. for nine or 10 years had been aimed at two specific points—the study of the behaviour of actual bridge structures from models to full-size bridges under the type of loading for which we had to design bridges. This had led to the formulation of certain methods of design and distribution procedures; they had been formulated in such a way that it was thought the designer could apply them relatively simply in the design office.

This work was supplemented on the experimental side by tests of model bridges and actual bridges to show the correlation between experimental and theoretical work, and it was felt there was sufficient evidence to support the use of these procedures in practice to give the engineer an idea of the accuracy he expected from his analyses.

Subsequently his department had studied different aspects of prestressed bridges. One was the study of types of bridges most suitable for specific span ranges; secondly they had studied skew bridges, which probably provided one of the biggest problems in the design of bridge structures in this country.

Standard Types

First his department considered what were termed standard types of bridges suitable for short and medium spans, and they investigated two types which they thought would fill the range of span from approximately 25ft. to 100ft. The first of those types was the box section or cellular construction bridge, which they investigated in some detail; he illustrated the construction of the models used.

They manufactured a series of longitudinal beams. Those in the first bridge they made were precast elements and longitudinally stressed together, they were placed side by side and between them were placed precast diaphragm units. This particular bridge consisted essentially of six main beams with two L-shaped beams, giving a cellular deck. The bridge was tested up to the elastic range and within that range its behaviour was exactly as one would forecast, using a normal distribution theory. Due to subsequent loading it had failed by breakdown of torsional properties.

They were not satisfied with the behaviour of the bridge, particularly in its ultimate load range, and they produced a second bridge, adopting a different production technique. The beams were pre-tensioned on the normal long-line system and the diaphragms precast as for the first bridge, but the top slab was cast in situ in permanent shuttering (in the first bridge the slabs were precast). Secondly, they introduced prestress in the longitudinal beams.

Loading tests showed exactly the same behaviour as in the first bridge as regards

working load conditions; but they were able to load it to ultimate and it had a load factor of 2.58 with the abnormal load vehicle.

The results of the tests on both bridges were studied in great detail and it was concluded that in practice—where the joints between larger members than were used in the models could be made much more accurately and detailed more precisely—both forms of structure were practical propositions. The second form seemed to give a better overall behaviour and appeared to develop a better capacity in all the individual members. Therefore it was felt that this type of bridge was ideally suited, by virtue of its very high torsional properties and distribution properties, for carrying heavy loads, such as the M.O.T. abnormal vehicle.

There were a number of bridges already of this type. The experimenters were of the opinion that this particular type of construction was suitable to span somewhere between 40 and 100ft. where abnormal loading was a design consideration.

The next type of standard bridge considered was one used fairly extensively in this country for many short spans (say) 25-50ft. It was sometimes called a composite slab, and utilised prestressed precast units with an in-situ fill above and around the units. Transverse prestressing was not applied, mild steel reinforcement being placed instead.

Controversy

When they had started the work there was controversy among engineers, designers and research workers on the need for transversely prestressing slabs and the efficiency obtained thereby. It was in effect an argument as between the elastic and ultimate load methods of design. We should consider the possibility that the concrete itself would give sufficient transverse distribution, without the need for transverse prestress, and compare their behaviour in bridges. Therefore, in his department they made and tested three bridges.

In the first of these 13 10ft. beams were placed side by side, with a 10in. bottom slab. The in-situ concrete was the main variable in this series of tests; the beams were standard throughout the three bridges. In constructing this first bridge of the series they used a strength of 10,000 p.s.i. They relied purely on the tensile strength of the in-situ concrete to distribute loads from one member to the next. Having illustrated the failure, Mr. Rowe said that at ultimate the load factor with abnormal loading was 2.7, which was more than adequate for most designs. He and his colleagues were happy about the behaviour of the bridge, but they felt that 10,000 p.s.i. would not be accepted.

Therefore, they constructed a second bridge, using a strength of 7,800. The behaviour of the bridge as a whole under elastic loading, with some mild steel reinforcement transversely, was better than that of the first. It had a slightly improved load factor, which was 2.9.

The third bridge in the series was a mild steel reinforcement design, and in the course of the work it was loaded many times to 1.65 times normal loading. There was extensive testing, and the load factor was 2.7, exactly the same as that of the first bridge; their load factors were respectively 2.7, 2.9 and 2.7. These were of interest in that one could calculate them very accurately, and using that process as a method of design one could deduce the amount of transverse steel required and

predict the load to an accuracy of 5 per cent.

As to the conclusions from the tests, he said that despite the severe overloading of the bridges, there was no increase in their stiffness under $1\frac{1}{2}$ times the abnormal vehicle load. The stiffness, which was the stiffness of a slab or a series of rectangular beams transversely connected, remained constant. The concrete strength was 2,400 p.s.i. at 28 days.

The results indicated that in the design of slabs of this type one could effectively consider them slabs, since the distribution forces had been shown to deteriorate by not more than 10 per cent.; there was no cracking of the in-situ concrete.

As regards the transverse stressing of these slabs, under the working load condition there were no visual cracks. The stress in the transverse steel and within the in-situ concrete indicated maximum stresses of the order of 3,000 p.s.i. under working load conditions, and that steel was not exactly contributing to the behaviour. However, it was of vital importance because it would improve the behaviour of the bridges. The large ultimate load of the bridges was largely due to the strength of the in-situ concrete.

The results of the tests had been incorporated in some work done by the Prestressed Concrete Development Group.

The two types of bridge he had discussed were considered purely because they were thought to be the types suitable in practice, and the work would help designers to understand better the way in which their bridges behaved.

The next part of the research was being directed to problems which so far had not been treated very well, one being the effects of local loads. The effects of distribution on local action could be studied at the same time.

Problem of Skew

Coming to the problem of skew, he said it had no theoretical solution which could be rigorously applied in a general case. Therefore, some simplified procedure must be adopted. His department had approached the problem in a fairly general way. They had taken a series of degrees of skew—0 deg., 15 deg., 30 deg., 45 deg. and 60 deg.—and for those degrees of skew they had considered a number of span/breadth ratios. For the five values of span/breadth ratios they had set up the equations. The computer calculated all the deflections for a load at any one of a series of points in the slab; in other words, it produced the influence coefficient for deflection by a point load for 45 points.

The solutions would be available in the not too-distant future and would enable designers, if they wished, to make a rigorous analysis of a slab. It must be an isotropic slab, to enable the solutions to be applied. All that the research had done was to provide the influence coefficient for the deflection.

That was one method by which we could approach skewed slabs, and in fact some organisation had extended the work to write a programme for the computer which would give the bending moment, once it was given the deflection.

This problem was probably not best treated from an elastic point of view, and he illustrated a rather more realistic approach—ultimate load. His department had derived a series of equations for skewed bridges which would take account of span/breadth ratios at varying skew, and longitudinal and transverse reinforcement, and they had checked it on a series of slabs. The approach using ultimate

load could be extended to other types of bridge.

The work had been considered in some detail and they felt quite happy about slabs under ultimate load conditions; and they were also in a position to say what was the economic distribution of reinforcement, designed purely on the ultimate load basis. They hoped that a publication would be available in the future which would show how to detail when one had an exceedingly difficult problem.

The last aspect of this ultimate load work that he mentioned was the tendency at the present time for us to consider the bridge as having a top slab, where it was very difficult to see exactly what would happen from an ultimate load point of view. To investigate the effect further they were producing a small bridge which they would use for an elastic investigation, to consider the use of prestressed concrete diaphragms in reinforced concrete bridges and their efficiency in creating a homogeneous member. Secondly, to consider the effect of local loads on the slab between diaphragms and stringers. And thirdly to consider the ultimate load of the structure as a whole, and try to derive suitable methods of analysis.

Other work they were doing in relation to bridges concerned reinforced concrete hinges in connection with prestressed and reinforced concrete bridges. A programme of tests was planned.

Illinois Research

Speaking of the research by the University of Illinois, he said they had been considering prestressed concrete for bridges for longer than had the C. and C.A., and their approach was different. They had said that in order to design better we must start from first principles and determine all the basic information on prestressed concrete as a building material. Their approach, therefore, was that shear, flexural strength, relaxation of steel creep and shrinkage were the essential things to study, and they had undertaken a very extensive programme of shear tests on simple and two-span beams. They simulated moving loads on the span and found that under such loads it was better to have more stirrups at the centre of the span than at the ends. That was contrary to our normal detail of reinforcement.

The next subject they had considered was the shear strength of the beams themselves; and shear was a particularly difficult problem. They had tested something like 200 beams. One was a little hesitant to say what would come out of that type of research eventually. However, they hoped the results would be incorporated in their code.

The relaxation tests had been carried out with the type of steel used in the United States. Generally speaking, relaxation figures there had been slightly higher than the figures determined in this country; so that the application of results obtained with American steel was very doubtful in this country.

However, the most important aspect had been a study of the creep and shrinkage effects. The investigations had been going on for two or three years, and 80 per cent. of the total deformation over a period of two years would occur in three months. They had produced specified curves for a given strength of concrete which would enable one to calculate the long-term effect of shrinkage and creep; and in one of their latest bulletins there was a calculation to determine the effect of casting the in-situ slab at some particular time. If we cast between one and six months, after two or three years the effects of shrinkage and creep were the same. Creep did not in any way affect the ultimate load of the structure.

This type of work, added Mr. Rowe, was very interesting when completed, but unfortunately there were very many variables to consider, and he feared that the University of Illinois would be doing this work for some time before the results would come out. However, it was of interest in that the approach was different

from that of research workers in this country.

The work of the Portland Cement Association in America was immediately applicable to prestressed concrete bridges in this country. When their laboratory was opened a few years ago they had decided to make an immediate investigation into prestressed bridges, a lot of these bridges having to be built as in this country. The bridge spans they were interested in were from 40 to 100 ft., and they used standard products to manufacture continuous and double-span bridges. They had studied individual beams of standard units, their flexural and shear strength under static and moving load conditions, the effect of shrinkage and creep of the concrete on precast members, they had worked with deformed steel bars and supports, and finally had tested a bridge structure as a whole to failure. They had simulated the behaviour of an actual structure, determined the effects of a percentage of shear reinforcement and also a percentage of deformed bar reinforcement in the top slab on the shear behaviour. They satisfied themselves that a design criterion could be formed for the particular construction.

Another set of tests was aimed at finding the fatigue stress of a joint as such in flexure.

Then they tested a series of beams 66ft. long to find the effect of shrinkage and creep on deformation with time. The deformations were left for 18 months, and they determined the ultimate deflection of the beams. The work was concluded with a test to destruction of the individual members.

Finally they erected a series of five-span beams jointed at the centre span with in-situ concrete which was placed at the same time as the top slab.

Mr. Rowe illustrated a two-span bridge completed and tested to destruction, and said its behaviour was perfectly satisfactory.

He had dealt with these investigations, he concluded, to show the intensity of the work which had been done and the specialised nature of it. The results were of great interest.

The CHAIRMAN expressed the indebtedness of the meeting to Mr. Rowe for an intensely interesting and comprehensive review of testing and research in this country and in America. At a time when we were examining and hearing about some quite exciting bridges which were due to the skill and imagination of our engineers, he said, it was right that we should not only know of, but recognise, the extent of the research which was behind all this work. The Group owed a great debt of gratitude not only to Mr. Rowe for the work he was doing, but also to the Cement and Concrete Association for having enabled the work to be carried out.

Mr. ROWE, in reply to a question, said that a test of a composite slab we should always get the type of failure pattern he had illustrated under abnormal loading. It was a question of the relative proportions of the slab and the relative magnitude of the dead to live load. For spans up to 50ft. he would say that the slab would always lift under ultimate load conditions.

BRIDGES ON THE MAIDSTONE BY-PASS

This subject was dealt with by Mr. H. Bowdler, M.I.C.E., M.I.Mun.E., M.Inst.H.E., county surveyor, Kent, in conjunction with Mr. F. M. Bowen, M.I.C.E., M.I.Struct.E., Scott and Wilson, Kirkpatrick and Partners, and Mr. A. S. McDermott, M.A.(Cantab.), A.M.I.C.E.

Mr. H. BOWDLER opened with a brief introduction to the Maidstone By-pass generally, and described some of the bridges which had been designed at County Hall, Maidstone.

With the exception of the bridge over the river Medway, he said, those on the western section of the by-pass, together with some of the smaller works on the eastern section, were designed by county

council staff. The standard design consisted of four simply supported spans and was a streamlined version of the one designed for the Ashford By-pass, the aesthetics of which were so warmly praised by Mr. Jellicoe when delivering the fourth Rees Jeffreys Triennial Lecture to the Town Planning Institute. Mr. Bowdler referred to this as a sound engineering job devoid of all unnecessary architectural frills—the work of an engineer from start to finish.

The deck construction for each span incorporated a number of precast longitudinal units inter-connected by in-situ diaphragms and reinforced concrete deck slab. The precast units were simply supported and were designed to act compositely with the in-situ deck slab. To give the bridges a light and slender appearance the longitudinal prestressing was performed in two stages. The first stage was carried out at works on the precast units and the second stage on the composite section.

To effect a further reduction of construction depth the diaphragms were used partially to prop the units during the construction of the deck slab. This was achieved by pouring the deck slab in longitudinal strips with a width equal to the spacing of three beams, so that the weight of each strip was distributed between all the units or composite beams in the span. It was specified that the concrete in each strip must attain a minimum crushing strength of 1,250 p.s.i. before the next strip was poured.

The ends of the beams of one span were staggered in relation to those of the adjacent span, affording a "central" bearing on the piers and leaving the end anchorage exposed for carrying out the second stage prestress operation. This arrangement gave a concentric loading of the piers and uniform bearing pressures over the width of foundations for all conditions of loading.

To eliminate expansion joints over the piers the whole of the expansion had been carried to one end of the bridge. This was done by fixing the deck on the lower abutment, providing hinges at the foot and at the top of the piers, and providing roller bearings under each beam at the higher abutment. The wide expansion gap that frequently disfigures the elevation of bridges had been avoided by extending the parapets at both ends by cantilevers. The inside and bottom surfaces of these cantilevers were tapered so that their areas at the extreme ends were reduced to a minimum. When movement of the deck occurred, the tapered surfaces of the cantilevers exerted a small pressure on the filling with which they were in contact. The purpose of the parapet extensions or cantilevers was to contain the filling of the approach embankments and to support the parapet railings for a short distance beyond the end of the deck.

The different spans of a bridge were inter-connected through the deck slab; but since deflection joints were constructed in the deck slab over each pier, special connectors were employed. The connectors were $\frac{1}{2}$ in. dia. bars 15ft. long, with hooks at each end. The central 12ft. lengths of the bars were covered with polythene sheaths so that the strain on the unbonded lengths permitted independent deflection of spans under live load and obviated continuity.

The deck was located on the substructure by dowels projecting from the precast units, registering with stops projecting from lintel beams of the piers or from the fixed end abutment.

In the design of the piers for these bridges a deviation was made from the prototype at Ashford by dispensing with the haunching of the lintel beams. It was felt that the straight soffit harmonised with that of the deck.

Advantage had been taken of the improved mode of bearing of the deck units to reduce the thickness of the piers to 18in.

These modifications had resulted in excessively high shear stresses for normal reinforced concrete, and to overcome this problem the lintel beams had been pre-

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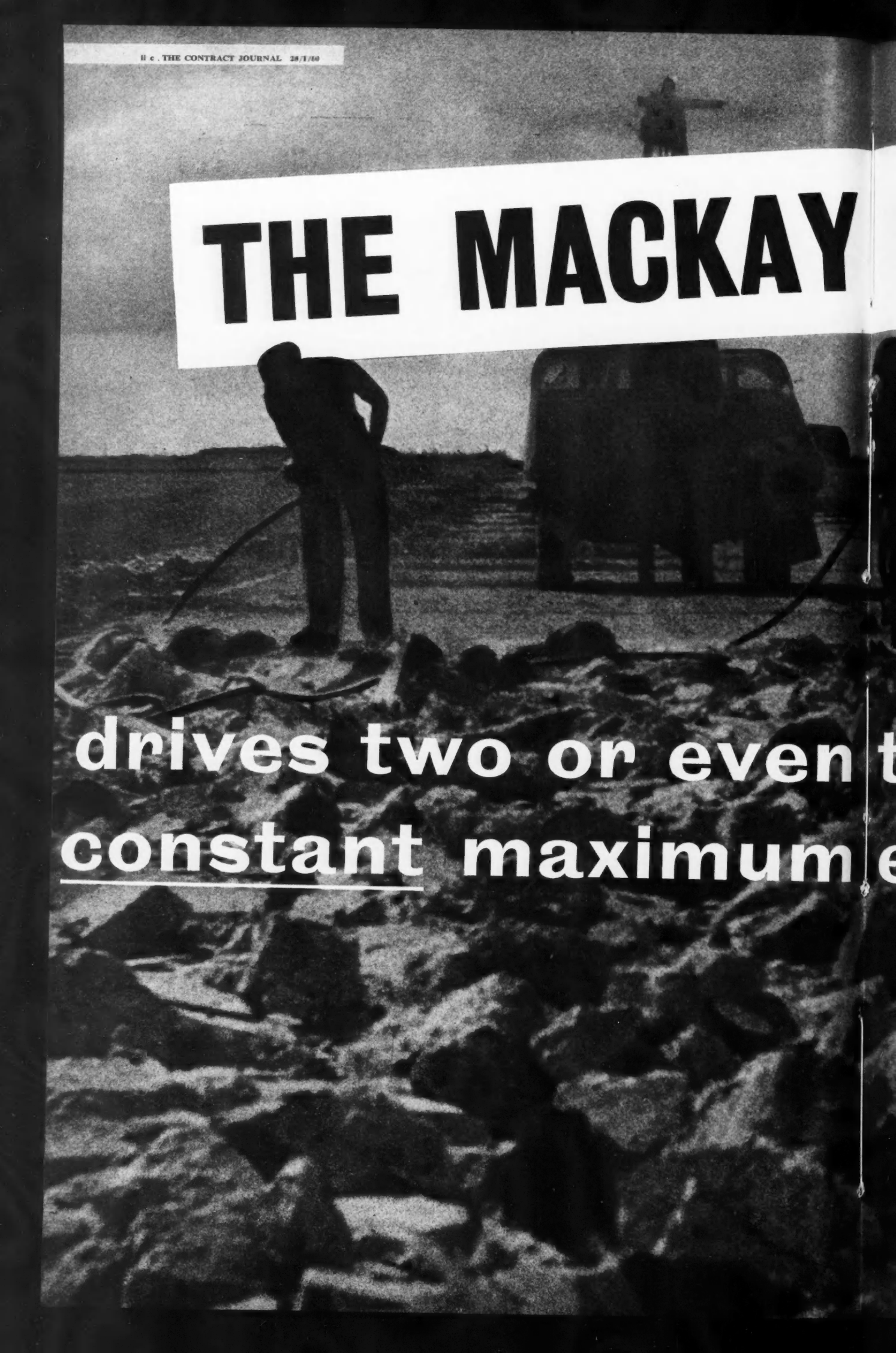
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stressed. The footings and columns, however, had been executed in normal reinforced concrete.

The minimum crushing strengths in 28 days had been specified for the concrete used in the construction of the bridges: Post-tensioned precast units, 7,500 p.s.i.; post-tensioned in-situ concrete, 7,000 p.s.i.; normal reinforced concrete, 3,600 p.s.i.

In determining the properties of the composite sections the modulus of the in-situ concrete had been taken at 80 per cent. of that of the precast concrete. The working stress in 0.276in. dia. high tensile steel wires had been taken at 70 per cent. of the minimum ultimate strength.

P.S.C. monowire anchorages for 12 0.276in. wires had been used for the longitudinal cables, but, because of their smaller area, Gifford-Udall tube anchorages for 12 0.276in. dia. wires had been used for the transverse cables. P.S.C. "hydra rigid" steel sheath of 2in. dia. had been used for the ducts.

Siting Problem

The Chatham Road bridge presented a problem owing to its siting over a fault. The fault crossed the site roughly diagonally, giving the Folkestone Sand beds to the south and the Gault Clay to the north on the down throw side. While both these subsoils offered a good foundation, Gault Clay would expand when relieved of its overburden pressure and contract when re-loaded with the structure; but the Folkestone Sands were not expected to vary under the same conditions.

The diagonal line of the fault precluded a settlement joint in the structure. To reduce any tendency for differential settlement between the parts of the bridge founded on the two strata, it was decided to build on normal footings on the sand and by piling in the clay.

The contractor elected to use West's Shell Pile, which complied with the specification.

Driving was much harder than expected and many piles were driven to refusal. In consequence the length of the piles carrying the piers were only 8-10ft. long; the free-end abutment was founded at a higher level and the piles were correspondingly longer. At this depth of penetration there was no danger of the works producing any physical change in the clay.

By making all spans equal it was possible to found the fixed end abutment wholly on sand, with the added advantage of simplifying the construction without appreciably lengthening the bridge.

Vehicles in distress were urged to draw off the carriageway on to the hardened shoulder. It was therefore essential to cater for this contingency on a bridge, and adequate edge stiffening of the deck had been provided in the Chatham Road bridge by positioning the four outer beams of all spans at 3ft. centres, which corresponded to the wheel spacing on the axles of the abnormal load. These beams carried the full load without dispersion.

In the other positions where the beams were straddled by the abnormal loading, and where dispersion occurred, identical beams were used at 3ft. 8in. centres.

The precast units were located so that the clear distances between end blocks over the piers were 1in. and 9in., alternately. Steel ducts occupying some of the wide spaces were cast into the diaphragms and conveyed G.P.O. cables over the bridge.

Problem in Levels

The Forstal Road bridge site presented a problem in levels. The gradient of the realigned Forstal Road was 1 in 18 where it crossed the by-pass, which was itself on a gradient of 1 in 48. The gradients, combined with an angle of skew, created large variations not only in the heights of the three piers, but also the heights of opposite ends of each pier.

The contours of the original ground helped to aggravate the situation by making the height of the fixed end abutment, which was at the lower end of the bridge, 31ft. high, and the other abutment

23ft. 6in. The abutments were buried and were of the skeleton or open type executed in normal reinforced concrete.

Forstal Road followed a 2 deg. 40ft. curve, but in view of the gradient and the angle of skew it was decided not to build the bridge to the same radius as it might detract from the appearance of the elevation, but to build it sufficiently wide to accommodate the curve of the carriage-way.

Owing to the skew it was not thought advisable to take care of expansion in the manner adopted for the other bridges. Instead, the ends of all precast units over the pier had been mounted on roller bearings.

The forming of the in-situ concrete diaphragms was simplified by making diaphragm starters an integral part of the precast units. The arrangement of the diaphragms and consequently the transverse ducts must be contrived so that the number of different units was reduced to a minimum. Special units were necessary for the outer beams and for some internal units as transverse anchorages must be cast into some or all of the diaphragms.

The slope of the bank on the north side of the by-pass had been limited to 1½ to 1, and the span of the approach opening was the same as the main opening. The span of the other approach opening had been fixed to give a balanced elevation. Pipe ducts were provided under each foot-path.

Coldharbour Lane bridge followed the general pattern of the other bridges described.

For the accommodation road bridge at Allington Quarry four precast units of similar section to those in the Forstal Road bridge were used in each span to carry a 50-ton tracked excavator. In this bridge it was necessary only to apply second stage prestress to the main spans.

As the bridge was only 12ft. wide, the piers were reinforced concrete walls hinged top and bottom to allow breathing.

The deck was waterproofed by two layers of bitumen sheeting, which was protected by 4in. thick reinforced concrete wearing surface.

Individual Designs Necessary

Mr. F. M. BOWEN said the primary conditions, notably widths and angles of skew, for the 10 bridges designed and supervised on site by the consulting engineers were such that an individual design was necessary for each of them. Complete standardisation was neither structurally sound nor economically justifiable. Nevertheless, a limited amount was achieved, and the bridges fell broadly into three groups.

The first group comprised Water Lane underbridge, Thurnham Lane underbridge, Hockers Lane overbridge and Boarley Road underbridge. These four were founded on Gault Clay, and the decks comprised simply supported precast post-tensioned beams with reinforced concrete deck slabs cast in place. Transverse post-tensioned or mild steel bar reinforced stiffener diaphragms acted in conjunction with the top slabs to distribute the transverse bending moments.

The second group were the Ashford Road and Boxley Road overbridges. These were founded on sand and were less liable to differential settlement; the decks were continuous hollow reinforced concrete slabs.

Group three comprised the remaining four bridges, each of which had to be different in conception and execution. They were the Chrismill underbridge, Sittingbourne Road overbridge, and the main Medway bridge and adjacent Allington underbridge.

Concerning the background of design, etc., Mr. Bowen said that reinforced (including prestressed) concrete was adopted as the principal medium of construction after up-to-date costs analyses had been considered in conjunction with other pre-requisites — such as good appearance and easy maintenance. Work

on the final designs for the eastern section was started in mid-1957, and for the western section in early 1958.

Design Data

The principal design data was identical with that adopted for the county's bridges, viz.:—

Super Loadings.

Underbridges (i.e., bridges carrying the motorway)—M.O.T. standard loading and the B.S.153 H.B. loading (i.e., incorporating 180T abnormal load).

Overbridges.

Overbridges—M.O.T. standard (H.A.) loading only except Sittingbourne Road, which was designed for the H.B. loading also.

Braking Loads.

As B.S.153, Part 3A.

Temperature Effects.

As M.O.T. standard requirements, i.e., ± 30 deg. F.

Concrete 28-day Maximum Cube Strengths.

Prestressed concrete (post-tensioned)—7,500 p.s.i. and 7,000 p.s.i.

Ordinary reinforced concrete in super-structures—4,500 p.s.i.

Ordinary reinforced concrete in foundations—3,600 p.s.i.

Handrailing.

A horizontal loading acting on the top rail equivalent to at least 100lb. per lineal foot.

Prestressing Systems and Equipment

As in the choice of the design data, a concerted policy was followed and the prestressing systems and equipment finally chosen, after discussion with the first successful tenderer, were as described by Mr. Bowdler, except only that transverse post-tensioning, where called for, was done by the Lee-McCall system.

Features of Bridges

Coming to common features, Mr. Bowen said all the foundations were continuous strips in ordinary reinforced concrete.

Except for the Medway bridge, the designs generally incorporated flexible pier and column supports, without free-moving bearings, wherever practicable. Earth-retaining abutments were eliminated. End bearings of the well-known rubber type were provided in all the bridges except the Medway and the Chrismill; in these two, steel roller and rocker bearings were chosen to meet the special conditions.

As to finishes, the supports of the bridges over railways were simply fair-faced. Those of bridges over minor roads were specified to be point-tooled. The piers and columns exposed to view from the motorway had been cast using white cement and white Cornish granite coarse aggregate and were to be point-tooled.

Undersides of the bridge structures were fair-faced. Treatment of the side elevations of the decks, etc., in the main was to utilise precast exposed aggregate facing panels. Slopes of embankments and cuttings under the bridges also were faced with patterns of precast panels and paving flags.

Again the Medway bridge was to some extent an exception; its size and location obviously demanded individual consideration.

The estimated unit costs of the underbridges on the eastern section, in round figures, varied from £3 per sq. ft. of plan area for the simpler ones, such as Water Lane, to a little over £3.5 per sq. ft. for the 70 deg. skew bridge at Chrismill. For the Sittingbourne Road 55 deg. skew overbridge, which was to carry a four-lane road, the figure was about £3.8, and for the big Medway bridge it was about £7.4 per sq. ft. of plan area. These figures included finishings and surfacings, but not transition slabs between the ends of the bridges and the roadways.

In the course of his general description of each bridge, he said that at the Ashford Road overbridge the road alignment was

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DIRECT LABOUR AN EXPENSIVE LUXURY, SAYS LIVERPOOL BUILDERS' PRESIDENT

EVEN leaders of the Labour Party themselves had warned that direct labour could be an expensive luxury, said Mr. R. E. Costain, in his presidential report to the annual meeting of the Liverpool Regional Federation of Building Trades Employers held in Liverpool recently. The electorate had given a decisive vote against any extension of Nationalisation, of which direct labour was only another form, but some local authorities were slow to heed the warning, he remarked. Wallasey Corporation for example had recently decided to embark on a direct labour scheme for building 23 houses "under the gravely false impression that by cutting out builders' overheads and profit they could do the work at less cost than the tenders received from experienced contractors."

Referring to Liverpool Corporation housing committee's request for a full report on the existing direct labour organisation in the City, Mr. Costain said ratepayers were entitled to know whether the Corporation's Direct Labour Department was the "expensive luxury" which many believed it to be and he hoped that when the report was presented it would show the full cost of work carried out by the department in such a form that it could properly be compared with the cost of similar work executed under contract.

The Ministry of Housing and Local Government had recently issued a directive that not less than every third contract should be put out to tender, with the direct labour organisation submitting its estimate in competition with contractors and it should only get the job if its figure was the lowest submitted. If it failed to secure a contract in this way it should not be awarded any further contract until it had been successful in competition.

"Gold" Land

The undeveloped land between green belts and towns (known officially as white

land) had been aptly dubbed "Gold Land," said Mr. Costain; for such was the price that had to be paid for it; and unless the authorities released more land for development earlier than was previously contemplated the present fabulous prices being asked for building land would become even more fantastic and would place home-ownership beyond the reach of any but the more well-to-do.

Drop in Apprentice Intake

Quoting figures showing that the intake of fresh apprentices had declined each year since 1954, Mr. Costain said the present situation could not be regarded with anything but great alarm. Repeated appeals had been made to employers to take on more apprentices and unless urgent steps were taken to remedy the position the industry would be faced with a far greater shortage of craftsmen than any which had been experienced in the post-war years.

Industry Back in Its Stride

Mr. Costain had begun his presidential report with a general review, and said the industry had been remarkably quick to get back fully into its stride again after the set-back caused by the credit squeeze. It was not surprising that there had been some temporary shortages of materials because some brickworks had been forced to close down during the credit squeeze while others had had to reduce their production with the result that—when the building programme was expanded again—it took some time to replenish the pipelines. Unfortunately, one of the lasting effects of the cutting back of capital investment in building was that displaced operatives were apt to leave the industry permanently for other occupations less susceptible to violent fluctuations in industrial activity, and employers now found themselves without sufficient craftsmen to carry out the work in hand.

No Justification for Wage Increase

The cost-of-living index had remained steady during the year and operatives were

not entitled to any increase under the industry's sliding scale agreement but they had made a claim for 4d. an hour increase and a third week of paid holidays. There was also a movement in industry generally towards reducing working hours all of which tended to increase the rate of wages per hour. Increases in wages which were not matched by increased productivity would spell a return of the dangerous inflationary spiral from which we had only recently escaped. Provided, however, wages and prices of materials could be kept on a steady keel and provided the builders on their part made a further determined effort to reduce building costs, the industry could look forward with confidence to the year ahead.

Election of Officers

Mr. J. L. Rawsthorne was installed as president of the Federation for the ensuing year, with Mr. A. A. Stott as senior vice-president and Messrs. J. B. Tomkinson, P. Wyatt and J. A. Bird as junior vice-presidents.

Mr. Harold Snow has been elected honorary treasurer to succeed Mr. T. W. Platt who has completed the maximum consecutive time of office allowed under the Federation's Constitution.

HOUSE LOANS EXCEEDED £400M. LAST YEAR

Chairman of the Building Societies' Association, Mr. Alexander Meikle, stated in London recently that during 1959 advances to house buyers totalled £470m., exceeding £400m. for the first time. This figure compared with £374m. in 1958 and with a previous peak of £394m. in 1955.

BALFOUR BEATTY'S JUBILEE BOOKLET

A 78-page illustrated booklet has been produced for Balfour, Beatty and Co., Ltd., to mark the occasion of the firm's golden jubilee. Published on a glossy art paper, with several colour plates among its many photographs, the booklet traces the history and achievements of the company since it was formed fifty years ago.

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complicated, with a skewed asymmetrical curve of varying radius and varying super-elevation.

At the Chrismill underbridge there was a vertical curve on the road over the bridge, with the apex just clear of the west end of the bridge. The large angle of skew, 70 deg., with the vertical curve and restricted depth available for the deck structure, created severe problems, especially in profiling and in providing for movements from temperature changes, shrinkage and creep. Also the traffic on the railway over which the road passed had to be unrestricted as far as possible.

The scheme adopted incorporated numerous slender columns with lower ends sleeved below ground level so as to increase their flexibility, and special two-way ("Universal") roller bearings at each end of the bridge. The deck was folded and tilted, but not warped; lightweight concrete infilling was being used to make up the vertically curved road profile.

The portions of the bridge deck clear of the existing rail tracks were of reinforced concrete flat slab construction 2ft. thick. The centre portion over the rail tracks utilised factory-made precast post-tensioned concrete beams set at right angles to the column lines, except the triangular areas adjoining the parapets, wherein rolled steel joists were substituted. The deck slab was in-situ reinforced concrete; its formwork was supported from the beams and caused no interference to the rail traffic beneath. Structural

depth in this portion was 2ft. 7in. overall, thickened to 3ft. over the columns.

Solid parapets had to be provided in any event to meet the requirements of British Railways and were made to form main edge beams, which owing to the skew, had to carry heavy non-uniform loadings. These edge beams, 7ft. 7in. deep overall, were of in-situ concrete in the four outer spans and of encased welded steelwork in the centre span over the railway.

Surface drainage from the deck was taken by downpipes hidden from view inside columns.

Sittingbourne Road overbridge differed from the other overbridges in that it was to carry a major twin-track (four lane) road with full H.B. loading. On this bridge also the road alignment was complicated, with large angle of skew, asymmetrical curve and varying overall width (due to variations in width of central reservation and some footpaths). Construction was by factory-made precast post-tension beams; deck slab and transverse diaphragm of in-situ reinforced concrete.

The design of the Medway bridge, the largest of the 10, was governed by several special conditions: (a) a tow path not less than 15 ft. wide and with a clear headroom of at least 16ft. 6in. had to be provided on one side of the waterway; (b) the structure had to be such as would allow the waterway to be widened at any time by up to 60ft. as a flood-relief measure; (c) the ground level on the west was 40ft. higher than that on the east side; and in

addition (d) the height had to be such as to afford the requisite headroom where the road crossed over the railway adjacent to the west bank. At a later stage the Medway Lower Navigation Company also decided that no falsework could be placed in the river at any time.

With these conditions a symmetrical design was ruled out.

The overall length was 325ft., made up by west cantilever 75ft. long overhanging west pier by 20ft.; centre suspended span 81ft.; balanced cantilever 88ft. long and on east pier; east end suspended span 81ft. long.

Construction was by four hollow box girders at 22ft. 6in. centres carrying a 10in. thick in-situ deck slab and interbraced by in-situ reinforced concrete transverse beams at 20ft. centres. The parallel girders were 5ft. 10in. deep and 7ft. 6in. wide, with walls 14in. thick, and flanges 10in. and 12in., thickened over support points.

The four main girders in the suspended span over the waterway each weighed 165 tons.

It was probably fair to assert, said Mr. Bowen, that the Maidstone By-pass bridges, viewed as a group, illustrated most of the problems which bridge engineers must be prepared to face and solve in order to satisfy the basic requirements of the road itself, whether the bridge designs had to be made in a hurry, as in this case, or not. To do otherwise was indefensible; such structures were adjuncts to the motorway and should follow, not dictate or interfere with, its course.

160-BEDROOM HOTEL BUILT IN EIGHT MONTHS AT LONDON AIRPORT

THE recently opened Skyway Hotel, the first hotel to be built in close vicinity to London Airport, provides a good illustration of how time spent on forward planning and site organisation reflects a shorter construction period. Comprising a four-storey accommodation block of 160 bedrooms and a single-storey public block, the building was erected, finished and furnished within only eight months of the commencement of land clearance.

A further factor in the speedy construction was the latitude allowed the main contractors. The architects, Fitzroy Robinson and Partners, acting on behalf of the Canadian promoters, Seaway Hotels, Ltd., invited contractors to bid not only on price and on time but also to produce the most economical structure considered suitable for the buildings, bearing in mind the restricted construction time available.

Bernard Sunley and Sons, Ltd., were awarded the contract, their offer being a "packaged deal," based on an outline structural design by their consulting engineer, H. G. Cousins, and using Concrete, Ltd., as sub-contractors for the design, manufacture and erection of the structural precast concrete.

On gaining the contract, a general programme involving all trades and specialist sub-contractors was drawn up and put into operation by the Sunley organisation. Subsequently, it was seen that this programme was realistically drafted and enforced, since very little departure from its requirements actually occurred.

Layout

The dormitory block is inclined to the main road at an angle of about 30 degrees, and is joined to the public block by means of an enclosed shopping arcade. The public block contains the main entrance hall with reception desk and lounge hall, a public restaurant with kitchens to the rear, an unusually shaped cocktail lounge, banqueting suite, and a separate lounge for hotel guests.

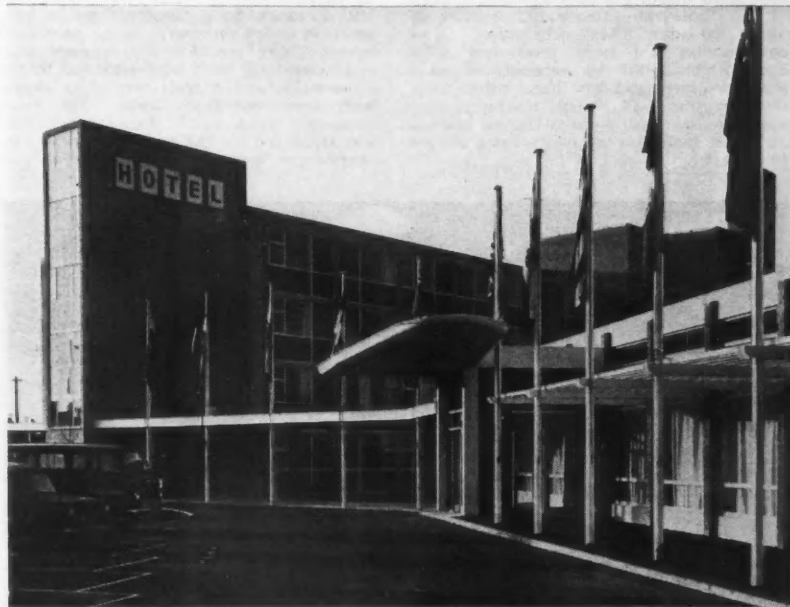
The basement floor, beneath the public block and shopping arcade, extends to the bottom of the bedroom block lift lobby. It is served by passenger lifts and, from the kitchens, by goods hoist and chute, as

well as staircases and separate linen and refuse chutes. Access to a 5ft. wide service duct beneath the centre of the bedroom block is obtained from the basement.

Food preparation and service rooms are contained in the basement, as well as cold storage and deep freezing facilities, special fish and dairy products storage facilities,

widened to 7ft. at five intervals to break up the monotony of a full-length uniform-width corridor and to provide passageway for trolleys, etc. The corridors are 8ft. in height and warmed by low-pressure hot water skirting heaters.

Ultimately, the bedroom block will have 260 double bedrooms. At present there are 160, arranged in two groups, larger



Main entrance to the hotel

wine cellar, linen rooms, staff dining facilities, toilets and locker rooms.

The boiler house, fuel tanks, telephone switchrooms, water softening plant, sewerage plant and hotel laundry are also housed in the basement.

Bedroom Block

Each of the four floors of the bedroom block has a central 5ft. wide corridor,

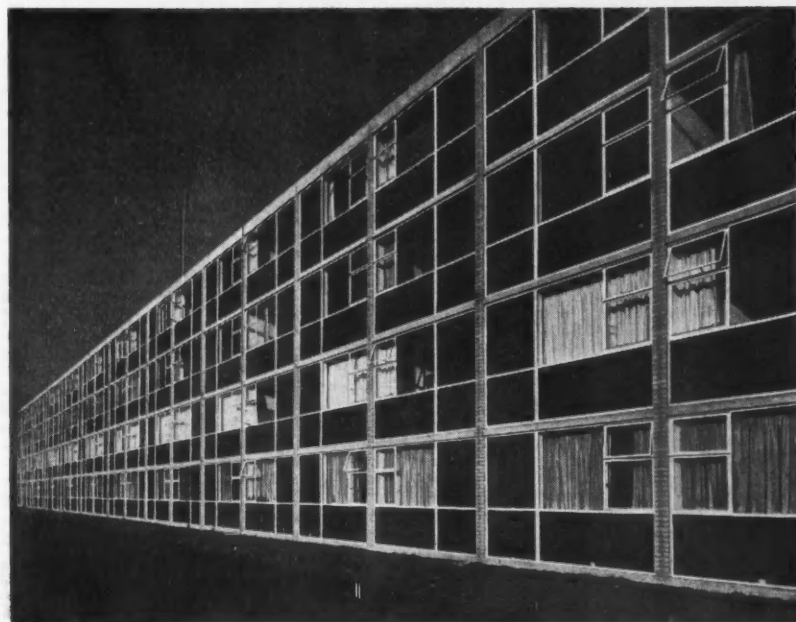
rooms overlooking the airport, smaller rooms across the corridors. In addition, on each floor there are breakfast preparation rooms, linen rooms, etc. The upper floors are served by two passenger lifts and two sets of concrete staircases, together with a steel staircase, which will be replaced by further concrete staircases when the bedroom block is extended later in the year.

In the construction of the two main walls of the block more than 20,000 sq. ft. of glass was used. The entire curtain-wall construction here is divided almost equally between large windows and opaque turquoise blue panels which incorporate glass and fibreglass. These panels use glass as the outward facing surface, and are backed by the colouring material and insulant. They are made by Plyglass, Ltd.

Bison wide slab hollow flooring and roofing was employed, in conjunction with brick cross-wall construction. The overall length of the building is 292ft., excluding an external staircase at one end, and the overall width is 51ft. 2in. The cross-walls are arranged to form 22 bays, each 13ft. 3in. wide between wall centres, giving clear spans of 12ft. 6in.

Seven lines of wide slabs were fixed by crane on each suspended floor, and bedded on mortar on to the brick cross-walls. These wide slabs are of hollow precast prestressed concrete, 54in. thick, 12ft. 6in. long, and designed for superloads of 40lb. per sq. ft., plus partitions. Where possible, standard 7ft. 2in. wide slabs were used, each of which is structurally equivalent to six normal-width hollow Bison floor slabs, but 3lb. per sq. ft. lighter and easy to handle and fix where crane facilities are available. These slabs were, in fact, used for four of the seven lines referred to.

For two of the other lines, one over the central corridor and one along the main road side of each floor, the slabs were 7ft. 9in. in width. Special wide slabs were

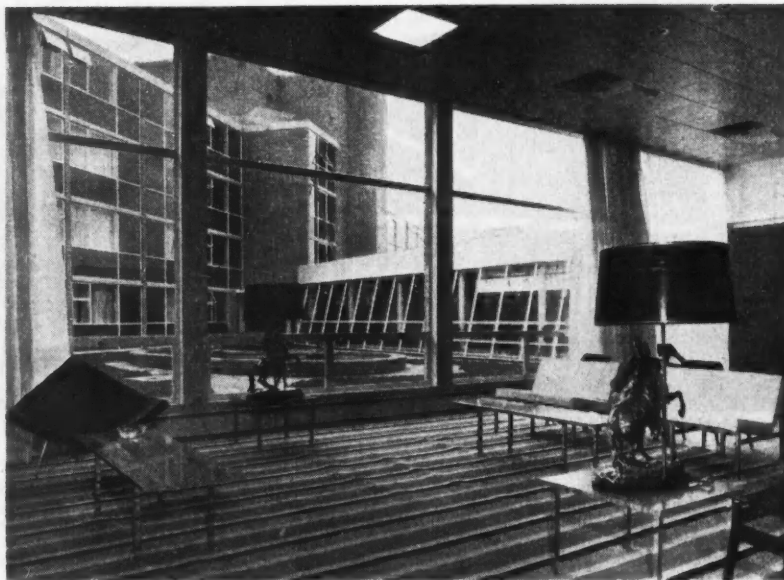


Curtain walling on the four-storey bedroom block

also used for the seventh line, that along the inner wall of the building, these being 4ft. 10in. in width and approximately equivalent to four hollow floor slabs.

The slabs used with the cross-wall construction have specially designed end notches with projecting nibs. These were employed, together with precast upstand-type edge beams, the latter being tied in to the wide slab construction at the in-situ joints between slabs. In-situ joints between wide slabs were used throughout, in order to achieve structural continuity, i.e., to ensure transference of loads from cross-walls above to cross-walls below the respective slabs.

The wide slabs over the corridors are supported on all four corners by the ends of the adjacent cross-walls, instead of along two sides. These slabs are of hollow construction but have reinforced solid ends, which avoid the necessity of using separate downstand-type lintel beams over the corridors. This construction enables a continuous flush soffit to be maintained and overcomes any necessity for a deeper floor section.



The reception foyer

The roof of the bedroom block necessitated the use of three different types of Bison roof construction, because of variations in load requirements, which range from 15lb. per sq. ft. to as much as 350lb. per sq. ft., plus finishes.

A penthouse runs along the full length of the building, immediately above the central corridor of the top floor. This penthouse is used as a plant and tank room and houses extraction fans for the bathroom air-conditioning system, heavy electrical equipment and water tanks for the bathrooms and toilets of the bedroom suites, as well as additional tanks for the garden and ornamental fountain.

Another part of the roof incorporates a lift motor room and a television amplifier room, and in both of these the floor is designed for a superload of 224lb. per sq. in., plus finishes. An adjacent section supports a 36-ton water tank, which contains 6,200 gallons of drinking water for the kitchen and public block supply. This is designed for a superload of 350lb. per sq. ft., plus finishes.

The remainder of the roof, about two-thirds of the total area, is designed for a normal roof loading of 15lb. per sq. ft., plus finishes, and is largely constructed of wide slabs. These are of prestressed hollow concrete 5½in. thick and span 12ft. 6in. between adjacent cross-walls, 7ft. 2in. wide units being used wherever possible.

On the main road side of the penthouse, two lines of 7ft. 2in. wide slabs were laid

by tower crane, together with a third line of 6ft. 2in. wide slabs, to make up the required total roof width on this side of the penthouse. On the opposite side of the penthouse, two more lines of 7ft. 2in. wide slabs were laid, handling in this case being by mobile crane. This part of the roof was completed with standard hollow Bison slabs, each 14in. wide, four of which were laid between adjacent pairs of cross-walls.

A flush soffit was required over the top floor corridor but, in this case, the use of wide slabs with built-in lintels was not possible, because of the heavy floor loading, due to the penthouse plant and tank room above. This problem was solved by making use of 6½in. thick composite hollow plank floor construction, in conjunction with primary and secondary beams. The corridor was bridged with in-situ upstand main beams carried by the cross-walls, and precast secondary beams were supported from these. 7in. thick composite solid plank floor construction was employed for the section of roof supporting the 36-ton water tank, similar floor

construction being used for the lift motor room and the television amplifier room.

Service Ducts

A simple ducting system was decided upon, the use of 7ft. wide service ducts in cross-walls and in floors and roofs, each duct being 1ft. 9in. wide internally and designed to serve adjacent pairs of bedroom suites with all services: low pressure hot water for heating, hot and cold water for bathrooms, drinking water, toilet flushing, sewerage, electricity, telephone and television.

Every other brick cross-wall has been laid with an integral duct at one end, the mating wide slabs being designed and made with corresponding cut-out sections, so as to form complete ducts 7ft. long and 1ft. 9in. wide. The cut-out part of each of these wide slabs was bedded on the brickwork of the ducted portion of the cross-wall.

Generally, this arrangement enabled all wide slabs with pre-made cut-out sections to be produced in two versions, with left-hand and with right-hand cut-outs, respectively, thus ensuring adequate economical production runs. This scheme was employed for the ducted wide slabs on the suspended floors and those on the roof. In addition, the 14in. wide hollow slabs on the roof were supported directly from the ducted parts of the cross-walls, and made correspondingly shorter in length.

The main services are brought into the bedroom block through a 5ft. square

crawlway-type duct, which runs beneath the ground floor central corridor. This was constructed at the same time as the cross-wall foundations, in-situ concrete being used for both purposes.

Public Block

The public block is 141ft. long and 92ft. wide and is on a ground-level concrete slab which overlays the basement and boiler house. External features include a prestressed concrete suspended canopy facing the car parking forecourt, and the appearance of an extended porch across the frontage, formed by a line of flagposts and a slatted sunbreak. The ground-level portion of the building consists of four main elements: a public facilities hall facing the main frontage; a rear hall space for exclusive use of hotel residents; an in-between L-shaped zone for internal communications, offices, cloakrooms, toilets, etc.; and a mezzanine floor immediately above the L-shaped zone, housing air-conditioning plant and water tank.

The public facilities hall along the frontage is about 40ft. deep and contains a 1,600 sq. ft. lounge hall and reception area, a 1,320 sq. ft. cocktail lounge and bar, a 2,000 sq. ft. public restaurant seating 150 guests, and has a 12ft. high suspended ceiling with built-in air-conditioning ducts and lighting services.

The roof structure consists of wide-span Bison purlins spaced at 5ft. between centres, carried on column-supported precast beams running along the main frontage and along the rear internal wall of this part of the public block. Precast concrete columns are spaced at 10ft. between centres, along all four walls, this spacing being used to suit the standard metal windows employed at front and sides.

Along the main frontage, the overall height of the columns is 16ft. 11in., and they carry 2ft. deep precast concrete fair-faced exposed facia beams, special beam-column connections being used to produce level soffits across the facia beams and the purlins carried by them. Along the two end walls, the facia beams are 3ft. 7in. deep and shorter precast columns are used.

Twelve 8ft. high, 9in. x 9in. section precast columns at 10ft. spacings, with 12in. deep beams support the mezzanine floor, with brick pier column extensions on the beam quarter points carrying both sets of purlins, one above the other.

The rear hall space is about 31ft. 6in. deep and contains a 1,920 sq. ft. banqueting suite, and kitchens and serveries occupying about 1,800 sq. ft. It extends sideways to form a semi-enclosed vehicle delivery yard, a refuse storage and collection area, and an enclosed electric supply sub-station.

The main roof purlins of the front and rear halls are spaced at 5ft. centres to suit the services, which run between them, these being air-conditioning and lighting services mainly. The suspended ceiling and the services themselves, including trunking, are suspended from mild steel angles recessed into the tops of the purlins. The purlins are designed for heavy loadings, consisting of the following: a superload of 15lb. per sq. ft., plus suspended ceiling and suspended services rated at 30lb. per sq. ft., and 15lb. per sq. ft. for roof decking, weatherproofing, wood wool slabbing, ¾in. screed, and three-ply felt, making a total of 60lb. per sq. ft.

Connecting the public wing with the bedroom wing is the shopping arcade in the form of an enclosed link block. It also uses a precast concrete frame, in this case having 28ft. span precast beams and circular-section columns with a special rough finish. The columns are an effective ornamental feature of the arcade and were, in fact, made 20-sided and left rough from the moulds.

The building now open comprises the first stage of a £500,000 contract for a 260-bedroom hotel. Work on the second bedroom wing of 100 rooms will commence shortly.

PROGRESS AT HUNTERSTON NUCLEAR POWER STATION

IN recent months the main news from the 320-MW nuclear generating station being built at Hunterston, Ayrshire, has been of industrial unrest rather than of substantial progress. The disputes, however, involved only one of the contractors on site and are now settled.

Although site work on the reactor pressure vessels and steam-raising units was at a complete standstill from the middle of September until the beginning of the new year, rephasing of the construction programme has, in fact, enabled work on the rest of the station to be continued without too much interruption.

Seen from a distance, the site is still dominated by the 300-ton Goliath crane. Except for a period in the later part of last year this crane has been in routine operation, its main use being for the movement of precast concrete units for both reactors.

On the prefabrication apron between reactor B and the steam raising unit fabrication workshop, and also on two others using the permanent-workshop foundations, the various courses of the pressure vessel for reactor A are almost complete under their temporary covers. The bottom head and support course of the vessel have been welded together and the whole unit is almost ready to be lifted by the Goliath crane, turned over, and placed inside the biological shield. There it will be welded to the outer skirt support which is already in position.

The second, third, and fourth courses, and the top head, are also substantially complete, while the inner shell is far advanced. The massive 7ft. deep support grid for the reactor core was delivered to the site in seven sections, welded together upside down, and then turned over by the Goliath crane for completion prior to lifting into the pressure vessel. This grid weighs 340 tons.

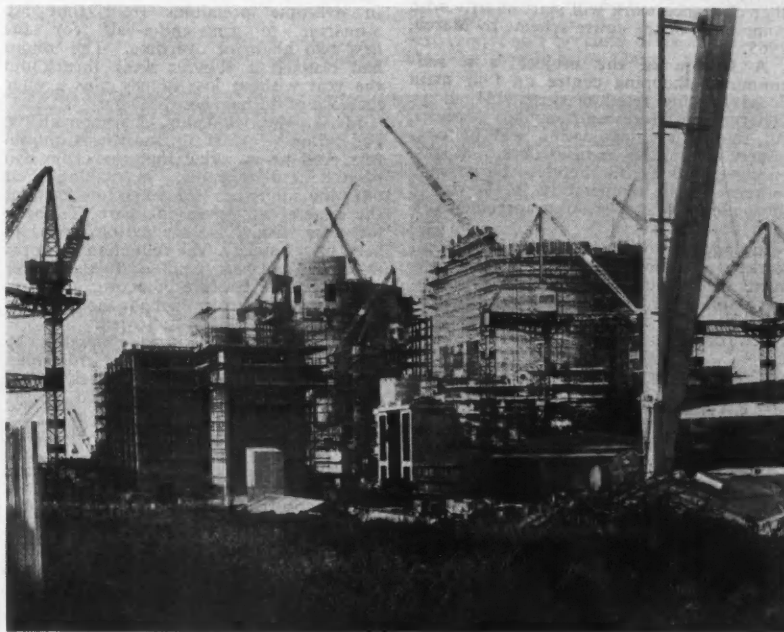
Steam Raising Units

In the special fabrication workshop, the first three steam raising units for reactor A are well advanced, while the remaining

five are at various earlier stages. As in the case of the reactor pressure vessels, every inch of weld on these shells is X-rayed, and any faulty welding rectified before stress relieving and pressure testing can be carried out. Stress relieving of the shells will be done by

tional weight of the water used for the pressure test.

Among the many temporary buildings on site, a recent addition has been that housing the degreasing plant. Here the protective coating on the steam raising unit tubes will be removed and the tubes placed in sealed



The two reactors under construction, with the charge-machine maintenance building rising on the left

means of hot flue gases, and the special furnace for doing this has been built in the workshop. Each shell will be pressure tested hydrostatically, immediately after stress relief, and the cradle that holds the vessel during both processes has been specially designed to carry the addi-

containers before they are passed to the units for erection under clean conditions.

Civil engineering work on the reactors has proceeded with as little interruption as possible. In the case of reactor A, the main walls of the biological shield are complete, and on either side of the service-machine hall concreting has reached a height of 196ft. above datum. Scaffolding has been partly removed from two of the quadrants. The structural steelwork, and most of the concrete floors of the reactor building (on the turbine-hall side) are complete, and the steelwork of the exit building (on the other side) is far advanced.

Spaced round the outside of the main structure are the eight plinths for the steam raising units. These plinths are now all finished, and concrete floors linking them together and to the biological shield are ready to receive auxiliary equipment when it is delivered. Inside the biological shield most of the shield cooling platework has now been placed in position.

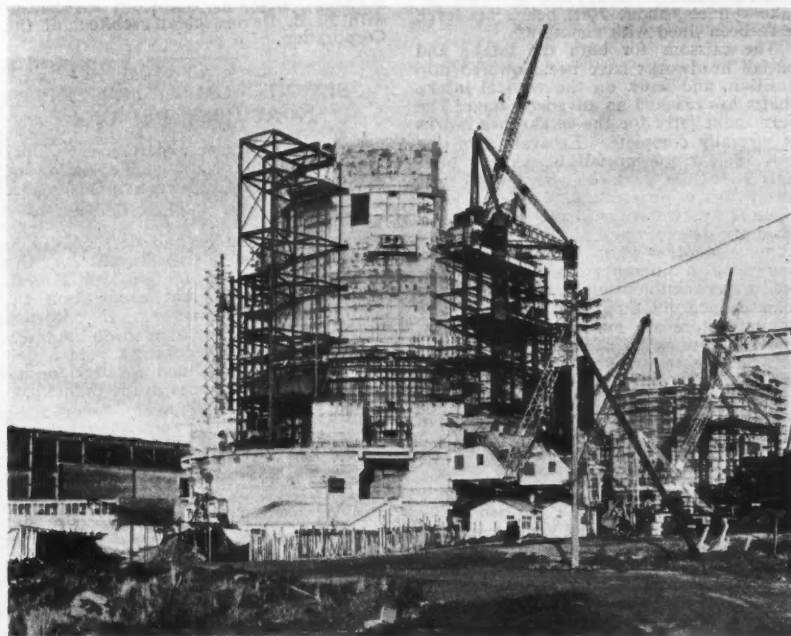
The biological shield of reactor B has reached a level of +134.00ft., and the bottom shield has been poured. Seven of the steam raising unit plinths have been completed, and the last is nearly finished. The shield cooling platework has been installed here also, and a start has been made on the steelwork of the reactor building.

Stacked near the reactors are numerous precast concrete beams which will form the main roof structures for their biological shields. More than 150 beams have been prepared altogether, the heaviest ones weighing over 300 tons.

Turbine Hall

In the turbine hall, the six blocks for the 60-MW turbo-generators have been finished. Erection of the main steelwork of the hall, which was begun at the end of

(Concluded on next page)



Reactor A, with reactor B and the Goliath crane behind to the right. On the left, part of the turbine hall can be seen

£5M. BIRMINGHAM REDEVELOPMENT

Laing Scheme Recommended

AT their meeting on February 2, Birmingham City Council will be recommended to accept a £5m. scheme submitted by the Laing Investment Co., Ltd., for the redevelopment of more than three acres in the Bull Ring and retail market area.

Construction will be undertaken by John Laing and Son, Ltd., and it is anticipated that clearance work will start shortly with completion of the entire scheme by March, 1963.

A feature of the project is a self-contained shopping centre on four main floors housing retail markets, 141 shops, departmental stores and ancillary services. All trading accommodation will be contained within the main structure of this building, and it will therefore be possible to regulate the temperature in the public thoroughfares and separate precincts on each floor.

In addition to the combined retail markets and shopping centre, the development will include, above this, a seven-storey office or residential block. There will also be a multi-storey car park and a new omnibus station.

CANADIANS STUDY U.K. CONCRETE TECHNIQUES

A party of over 70 Canadian architects and engineers arrived in London last week to learn about the latest aspects of concrete design and construction in Britain.

Said the leader of the party, Mr. Joseph Boux: "There is much the British can teach us about the use of concrete in modern bridges and buildings. We are bringing our architectural and engineering friends to London for intensive study of British know-how that can be applied in Canada."

The programme, much of which is arranged by the Cement and Concrete Association, began on Friday, when the party attended a conference on prestressed concrete bridges and saw an exhibition of the latest British equipment for prestressing.

This week the Cement and Concrete Association has arranged a course of lectures and demonstrations. Next week the party will inspect buildings and bridges under construction in London and elsewhere. Their tour will include a visit to Birmingham and Coventry.

During the fortnight, there will also be a number of opportunities for meeting and talking with British manufacturers of building plant and materials, and the third week of the party's stay will be left free for individuals to follow up any particular contacts they may wish.

BIRMINGHAM ACCEPT £534,000 DIRECT LABOUR BID

Birmingham House Building Committee has placed a £534,000 contract with the city's Direct Labour Building Department for the erection of 275 dwellings and 145 garages on the Nazareth House estate at Longbridge. The tender was the lowest submitted.

A report on the Department's progress during the past five years appeared in the Journal last week.

YARMOUTH BUILDERS ELECT OFFICERS

At the recent annual meeting of the Yarmouth, Gorleston and District Building Trades Employers' Association the following officers were elected: President—Mr. F. H. Holmes; vice-presidents—Mr. R. J. Wright and Mr. P. T. Radmall; treasurer—Mr. C. A. Houchin.

40-HOUR WEEK IN WINTER Civil Engineering Agreement

A NEW approach on the question of reduced hours of work was agreed last week at a meeting of the Civil Engineering Construction Conciliation Board when the unions accepted an offer made by the employers to reduce working hours from 44 to 40 per week in the four winter months November, December, January and February.

The offer included a compensatory wage increase of 1½d. per hour and an increase in overtime premiums from time-and-a-quarter to time-and-a-half for the first two hours of overtime. The unions had claimed a 40-hour week throughout the year without loss of pay plus a wage increase of 4d. per hour.

Mr. J. Maurice Laing, chairman of the Federation of Civil Engineering Contractors, said he was glad that the claim had been settled amicably. In making their offer the employers had taken into account the general desire on the part of labour for more leisure and the national need to keep prices steady. The reduction in working hours had been confined to the winter months when, because of poorer site conditions and shorter daylight hours, production would be least affected.

The offer had been made possible by increased productivity resulting from high mechanisation and new techniques, which the civil engineering unions had always encouraged.

Mr. Laing believed that, with continued goodwill on both sides of the industry, the increase in wage costs resulting from the settlement could, over a period of time, be largely absorbed by further increases in productivity.

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1958, has also been completed, and much progress on glasswork, brickwork, and roofing, is evident. The cooling water culvert manifold along the northern side of the turbine hall is complete. Among the internal equipment, the overhead gantry crane has been installed and tested, and all the storage tanks for auxiliary cooling water, etc., have been placed in position. Outside the hall, the transformer foundations are ready.

About half a mile down the coast, work continues on the main pumphouse for the circulating water system. The pump chambers and filter bays have been finished and penstocks installed, and the twin intake tunnels, about 70ft. below sea-level, have been lined with concrete.

The caissons for both the intake and outfall headworks have been lowered into position, and work on the vertical intake shafts has reached an advanced stage. The permanent jetty for the intake headworks is virtually complete. Excavation of the culverts for the outfall works has been finished, while work on the tunnels and headworks is progressing.

Building operations have now spread from the reactors and turbine hall, and a number of other permanent buildings are appearing on different parts of the site. The feed water treatment plant, charge machine maintenance building, and uranium and graphite store are making good progress, and excavations have been made for the active-waste treatment building. The administration and welfare blocks are far advanced, and it is expected that they will soon be ready for occupation by members of the permanent station staff.

A substantial network of sewage lines, drains, power cables, etc., has now been installed below ground level to provide permanent site services. The storm-water and foul-sewage pumphouse is complete and the storm-water side is in operation. This was, in fact, the first permanent work on the station to be commissioned.

Hunterston power station is being built for the South of Scotland Electricity Board by The General Electric Co., Ltd., in association with Simon-Carves, Ltd., The Motherwell Bridge and Engineering Co., Ltd., and Mowlem (Scotland), Ltd.

Late Construction News

£100,000 YEovil FACTORY.—Work is due to start next month on the construction of a £100,000 factory at Larkhill, Yeovil, Somerset, for C. and J. Clark, Ltd. The contract has been placed with D. Singleton and Son, Central Road, Yeovil. Sir Alexander Gibb and Partners, Queen Anne's Lodge, London, S.W.1, are the consulting engineers, and the quantity surveyors are Venning and Hope, 16 The Crescent, Taunton.

BIRMINGHAM DWELLINGS.—C. Bryant and Sons, Ltd., 65 Whitmore Road, Birmingham, 10, have been awarded a £229,000 contract by Birmingham City Council for building 107 dwellings in four-storey maisonnettes and houses at Long Nuke Road, Northfield.

SHOPS AND MAISONNETTES.—Eighteen shops, with maisonnettes over, are to be built on a site bounded by Warwick Road, Station Road and Oxford Road, Acocoks Green, Birmingham, by Tersons, Ltd., Erdington, Birmingham, 23. The architect for the scheme, acting on behalf of Second City Properties, Ltd., is John H. D. Madin, 83 Hagley Road, Five Ways, Edgbaston, Birmingham, 16.

DIRECT LABOUR AWARD.—Battersea B.C. are to employ direct labour on the erection of 46 dwellings in two-storey construction at Winstanley Road/Knox Road, stage one. The estimated cost is £102,069.

HACKNEY HOUSING SCHEMES.—Hackney B.C. have approved schemes for the erection of 102 dwellings and 20 garages at Amhurst Park No. 1 site at a cost of £403,000, and 18 dwellings and four garages at Kyverdale Road site, at a cost of £60,565. Subject to Ministry approval, both schemes will be carried out by direct labour.

KINGSTON COLLEGE CONTRACT.—The tender of Humphreys, Ltd., Knightsbridge, London, S.W.1, has been recommended for the final stage of the Kingston-on-Thames Technical College. The contract, worth about £430,000, will cover the construction of an additional wing and some alterations to existing buildings. Plans are by the Surrey county architect, John Harrison.

NEW TOWN CONTRACT.—Leslie and Co., Ltd., Peel Street, London, W.8, have been awarded a £946,000 contract by Basildon Development Corporation for the erection of 505 dwellings and 126 garages at Lee Chapel South. The architects are W. W. Atkinson, Smith and Haywood, 4 Raymond Buildings, London, W.C.1, in association with A. B. Davies, chief architect of the Corporation.

SEVERE COMPETITION IN NORTHERN REGION

Mr. J. W. Harper, northern regional secretary of the National Federation of Building Trades Operatives, in his report for 1959, referred to unemployment in the building trade, and stated that although the past year had been better than 1958, the industry had not recovered from the credit squeeze to regain the 1956-7 level.

Mr. Harper said that competition for contracts had been severe. In one case 34 firms tendered for a riverside contract, and 24 for a £7,000 contract. He added that much still remained to be done to recruit more apprentices to the industry.

£357,850 MAIDENHEAD TOWN HALL CONTRACT

Maidenhead Borough Council has accepted the £357,850 tender of J. Jarvis and Sons, Ltd., 239 Vauxhall Bridge Road, London, S.W.1, for the erection of a Town Hall on the St. Ives car park site. Work will begin on March 1 and is scheduled for completion in 90 weeks.

Architect for the building is Mr. Guy North, of North and Partners, Maidenhead, the consultant architect being Sir Hubert Worthington.

International Construction

£23M. BRITISH-BUILT HYDRO-ELECTRIC PROJECT IN TURKEY

EARLIER this month the Prime Minister of Turkey, Mr. Adnan Menderes, officially inaugurated the Hirfanli hydro-electric project in Anatolia. This £23m. scheme—constructed by British contractors—harnesses Turkey's longest river, the Kizilirmak, to produce 110,000-kW from the three 44,000-h.p. hydro-electric generators already installed.

It is dominated by a dam, 270ft. high and 1,200ft. long, and is also the key to the construction of four downstream power and irrigation installations which will raise the output of the whole project to 1,500,000,000-kWh a year.

The development is part of the Turkish Ministry of Works' nationwide scheme of interconnected power grids, fed by hydro-electric works and designed to supply over 60 per cent. of the country's requirements. But Hirfanli is also planned as a holiday resort for the people of Ankara, 90 miles to the south-east, and the new lake, 46 miles long and nine miles across at its widest point, which has formed behind the dam, will be used for sailing, fishing and bathing.

The site was virtually inaccessible and a 15-mile approach road had to be built as well as 21 miles of temporary roads for the huge assembly of plant and transport used in construction. This plant included 12 heavy excavators; 38 Euclid trucks; 94 vehicles, including motor coaches and a 3,000-gallon tanker; rollers; drilling machines; generators; pumps; and mixing and batching plant.

The labour force was predominantly Turkish, and during the peak period of the contract nearly 3,000 men living in two specially erected camps were at work night and day.

Tunnelling

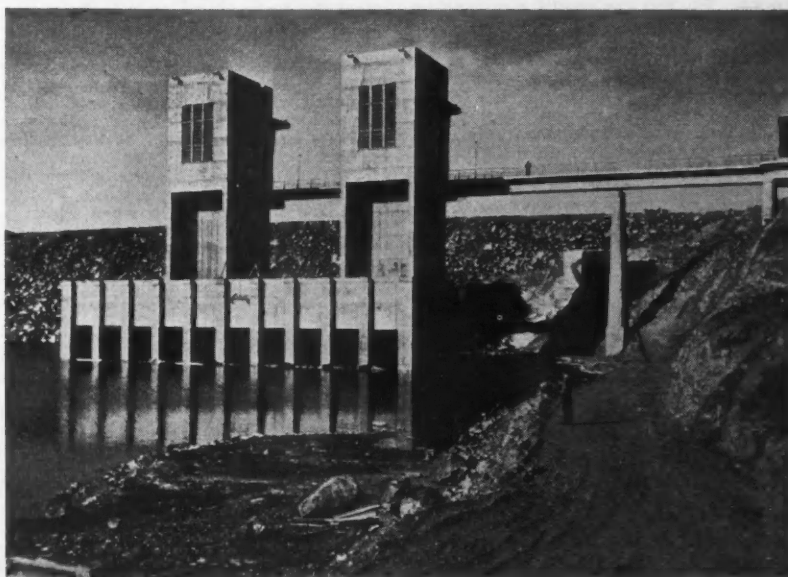
Before the work of building the dam could advance very far it was necessary to divert the river and build earth and rock coffer dams to enable the undertaking to be accomplished in the dry. Two diversion tunnels were driven on the right abutment of the dam, one 602yd. long and the other 544yd. long.

While initially the tunnels were for diversion purposes, the central portions, which have a lined diameter of 26ft. against the 23ft. of the diversion sections, were later to be used to convey the water from the power intake to the turbines in the power house.

Thus at the same time as the main tunnels were under construction, inclined

of 640ft., used 795 tonnes of steel sections for the linings and had the welds radiographically tested.

In December, 1954, work began on the tunnelling, some 68,000 cu. yd. of material being shifted to reach the upstream approaches of the tunnels. Tunnelling was carried out by hand drills and pusher legs, the rounds being blasted with 70 per



The earthquake-proof water intake structures

shafts were driven from the power intake. These shafts sloping steeply from the power intake were graded so as to level off at their point of entry into the main tunnels. Three-quarters of the way down these tunnels each was divided into two steel-lined, bitumen-enamelled, penstock tunnels of 16ft. 3in. lined diameter. These four penstocks leading to the turbines of the power house have a combined length

cent. gelignite. Rock conditions were very bad, and extensive crushed and shattered areas needed steel arching to support the roof. Progress was necessarily slow, but in spite of this, 90,000 cu. yd. of rock were removed in 11 months, the tunnels being "holed through" in November, 1955. Exactly a year later temporary bulkheads were constructed to prevent water flowing through the penstocks, the concrete lining was complete, and diversion of the river began. For the tunnel linings 45,000 cu. yd. of concrete had been used. In the grouting of all dubious areas of rock in the tunnel environment some 1,000 tonnes of cement were injected.

Shortly after diversion came a period of floods, but by June, 1957, they had subsided sufficiently for work to be resumed on adapting the tunnels for power. Number two tunnel, where it had not been possible to finish the grouting before the diversion of the river, was closed by lowering a light 13-tonne gate at the entrance. Grouting finished, it was reopened and number one tunnel was closed. A concrete plug was now placed immediately upstream of the intersection with the power shaft containing twin 45in. diameter valves to allow compensation water to flow downstream. So that the valves could be salvaged later, flap valves were fitted to the upstream end of this plug; these were operated by a spindle passing through the plug to the downstream end.

By November 2, 1957, the dam had reached a height of 16ft. above the sill of the power intake, and work on these structures was so well advanced that it was safe to bring the Kizilirmak's water under control 3½ months ahead of schedule. On that date number two tunnel was closed permanently with a heavy steel and timber gate. Now only compensation water could flow through the twin valves



The turbine hall with the tail race feeding downstream schemes

in number one tunnel and the reservoir began to rise.

A solid plug was then placed in number two tunnel upstream of the intersection with the power shaft, while below the entry into the two penstock tunnels a further plug was placed. Inside the latter plug runs the 8ft. diameter compensating pipe leading to the 7ft. butterfly valve in the discharge regulator house at the downstream face of the tunnel. This permanently controls the flow of compensation water to the river and is opened when for any reason the turbines are not running, or running too slowly to permit an adequate flow of water downstream.

By the time work in number two tunnel was completed the waters of the reservoir had risen to the sills of the power intake. At this stage water was allowed to flow down the power shaft in number two tunnel. Number one tunnel was closed at the power intake, the temporary twin valves were closed and the flap valves dropped. With the waters retained by the flap valves, the 45in. diameter valves were salvaged and the plug at the intersection with the power shaft completed; at the same time another permanent plug was being placed below the penstocks. The extent of the work in the plugging operations can be judged from the fact that 4,200 cu. yd. of concrete was placed.

Dam and Spillway

As soon as the Kizilirmak had been diverted through the tunnels two earth and rock coffer dams were built to prevent

cutting at a level 33ft. lower than the dam crest. This weir is surmounted by a reinforced concrete bridge, 350ft. long, which carries the main access road to the works. The channel by which storm waters will reach the river below has its gradient broken in three places by 60ft. cascades. At the point where the spillway joins the river the channel narrows to 70ft.

Power Intake

Meanwhile, from the outset work had been proceeding on the massive power intake structure. Setting the foundations into the hillside had involved the excavation of 130,000 cu. yd. of rock. With two intake towers, it is 140 ft. wide and the reinforced concrete walls are 5ft. thick. The trash racks for preventing debris from the reservoir entering the turbines are 170ft. above ground level, and it is 65ft. from the front of the trash racks to the actual tunnel mouths.

In order to be able to maintain the tunnels and to stop the flow of water to them in an emergency, each tower is equipped with an intake gate weighing 80 tonnes and operated by a 120-tonne capacity electric winch in the top of each tower.

The gates, which are operated from the power house, are of the upstream sealing type, and will close even when water is flowing into the tunnels at maximum speed. A bulkhead gate for placing in front of the main gates is provided to enable them to be serviced. Access to the power intake structure for maintenance

water turbines rotating at 187.5 revolutions per minute, but the machines, when operating at a 217ft. head of water, can each deliver 50,000-h.p.

Special features of the turbine runners, which are driven round by the water, are that they are all-welded and completely protected against cavitation by stainless steel and they have self-lubricating bearings. The water reaches the turbines through the steel-lined penstock tunnels. A 13ft. 6in. butterfly valve has been positioned at the end of each of the three penstock tunnels now in use to cut off the supply of water when the turbines are not running. Each turbine drives an umbrella-type alternator which is capable of generating 36,800-kW of power at 10.6-kV.

The conveyance of these heavy items of plant to site presented considerable problems because, although the turbines and alternators could be transported in sections, the butterfly valves, each weighing 60 tonnes, were shipped to site in an almost complete state. A workshop to assemble the plant was set up on site and, indeed, the whole turbine hall became an assembly bay. As an example of the engineering work done on site, each spiral casing, a huge snail shell some 39ft. across and weighing about 55 tonnes, was transported to Hirfanli in four sections and welded into a completely watertight unit there.

Each alternator stator was transported in three sections to be assembled and electrically connected on site. The butter-



Panoramic view of the Hirfanli scheme

water reaching the main dam area. One coffer dam was at the upstream face, the other downstream just above the outlets of the diversion tunnels. In preparation for building the dam a 20ft. deep by 33ft. wide trench, already dug up the abutments of the dam ready for filling with impervious core, was continued across the river. Owing to the fissured and pervious nature of the rock foundations the area below the trench had been grouted by injecting cement through boreholes 140ft. deep. It was now only necessary to pump the trench dry and blanket grout the bottom. Ensuring a watertight foundation before tipping the impervious core involved some three miles of drilling and the use of 100 tonnes of cement.

Construction of the dam and spillway now proceeded simultaneously. The impervious clay core of the dam was obtained from borrow pits 1½ miles distant in the flood plain area, while the main material for the dam came from excavations for the spillway which is ½ mile away. In all, some 2,500,000 cu. yd. of carefully prepared and graded material was placed before the dam reached its crest in September, 1958.

Making the spillway involved widening a natural valley to 350ft. About ¼ mile up the valley and at right-angles to it, a 200ft. cutting was made through the left-hand hill, thereby reaching the course of the river well downstream of the power house. The reinforced concrete spillway weir was built at the entrance to this

purposes is by a bridge, 250ft. long, which carries a trolley for the bulkhead gates.

Power House

The power house is designed to resist secondary earthquakes. Because of this, there are no windows and particular attention has been paid to high intensity fluorescent and tungsten lighting and to interior decoration. The entrance hall is in the south annexe which houses the administration offices, control room, auxiliary switchgear and emergency diesel generator.

At the north end of the main building are the heating and ventilating plant, oil purification plant and machine shop. In the basement is a water treatment plant and a dewatering pit which receives all surplus and storm water from the plant. The generator hall has five bays, one of which is used for servicing and assembling the plant. It has a red floor and blue tiles up to 8ft. above floor level, and the walls are pale blue with a white ceiling.

A very tight construction schedule necessitated the closest collaboration between the mechanical and electrical engineering staffs, and the works were programmed so that as soon as civil engineering was finished in one section of the power house, the mechanical and electrical engineers could take over and begin installing their plant and equipment.

The power generating plant consists of three vertical shaft 44,000-h.p. reaction

fly valves were built with such precision and their sites were prepared with such skill that it was possible to lower the valves into position and connect them to their respective spiral casings and penstocks in a little over a week for each unit. Since the positions of the penstocks and spiral casings were fixed already, both horizontally and radially, this was a remarkable achievement.

Transformers and Switchgear

At the back of the power house stand the three huge three-phase generator transformers, each of 40,000 kilovolt amperes, which step up the voltage from the generators from 10.6 kilovolts to 154 kilovolts for transmission to the switchyard. Associated with each machine there is also a unit transformer of 350 kilovolt amperes' capacity which reduces the generated voltage from 10.6 kilovolts to 400 volts, at which level it is used in the power house for pumps, fans and auxiliary purposes.

When the power at 154 kilovolts reaches the switchyard, it flows to the Kirikkale lines and so to the national grid. Part of the power is reduced in the switchyard by a 10,000 kilovolt amperes transformer to 34.5 kilovolts, at which voltage power is transmitted to Hirfanli village and eventually to Bala and Karakecili. It is also possible to supply the auxiliary needs of the power house by reverse power from the Kirikkale line through the 600-kilovolt

(Concluded on page 470)

International Construction

CONSTRUCTION OF 25-MILE PIPELINE IN THE PERSIAN GULF

A SUBMARINE pipeline, 25 miles in length, has been constructed by the Collins Group of Companies to link the land line of the Iranian Oil Exploration and Producing Company with a new loading terminal at Kharg Island in the Persian Gulf.

The land lines had already been brought from the Gachsaran oilfield over 74 miles of mountains and desert to the coastal town of Gavaneh, and from there a link was needed 25 miles across the waters of the Persian Gulf to the tank farms under construction at Kharg Island, where a four-berth marine terminal was being constructed offshore in deep water to provide facilities for loading a 100,000-ton tanker in 20 hours.

Geologists, engineers and divers from the contractors spent several weeks compiling a geo-aquatic study of the Persian Gulf, and with meticulous care the density of the sea water, wave magnitude, rock and coral core samples were obtained, and general oceanographical statistics were collected and studied. Weather conditions, climate and storm frequency rates were charted, and with the formulation of the last detailed calculations it became possible to select the best method of laying the pipeline.

Three miles from Kharg and 19 miles from the mainland, a sandy island called Khargu offered an ideal make-up and launching area and, with this in mind, the contractors suggested a plan to build the line in two parts. This involved taking a 30in. dia. pipeline to the Kharg tank farms three miles across the Straits from Khargu, then across the launching island to the second part, a hazardous long pull of 19 miles to the coast at Gavaneh.

With the acceptance of this proposal, air-conditioned accommodation, workshops and stores were erected on Khargu, providing a self-contained town. One of the first jobs was to deepen a natural inlet to allow the heavily laden barges to be unloaded directly on to waiting trucks. An airstrip was cleared for aircraft and helicopters, helping to speed the passage of men and materials.

With the beginning of work on the actual pipeline, the 26ft. lengths of pipe were butt-welded into 28 strings, three

strings of 4,400ft. for the Kharg to Khargu pull, and 25 strings of 4,000ft. for the long pull. Each and every joint was X-rayed and tested before receiving the protective coat of bitumen and fibreglass wrapping.

To protect the pipe and give it the added weight needed to keep it on the seabed, an outer coat of reinforcing concrete was monolithically applied, giving it a total

equipment aboard the pulling barge. To ensure maximum efficiency, the main anchors were set on the mainland, and the barge was then moved out to sea paying out its 2½in. diameter steel hawser as it headed for Khargu Island. This was the first time this method had been used for laying 19 miles of continuous pipeline.

Launching operations were continued



The pipeline moving into the Persian Gulf

weight of 22,500 tons. The concrete was allowed to cure, then side-boom tractors moved the first mile length on to already positioned launching units.

As the pipe was to be laid by the friction transposition method, trenches had to be dug and gaps blown through the coral reef so that the pipe could be pulled along the seabed with a controlled radius.

The marine crew spent weeks on preparation and rigging of the specialised

day and night and were made especially difficult by the fact that through a period of time the current had cut a channel in the seabed a mile wide and 150ft. deep. The pipeline, following the contours of the ocean floor, entered into this tidal race where water was gushing across the pipe at a rate of 5ft. per second. Other problems included the 12ft. waves and schmall which spring up suddenly in the Persian Gulf.

Notwithstanding all these conditions, foot by foot, string by string, launching continued until at Gavaneh appeared the pulling head of the pipeline. This was then pulled to its final resting place ready to be tied into the land pipeline from Gachsaran.

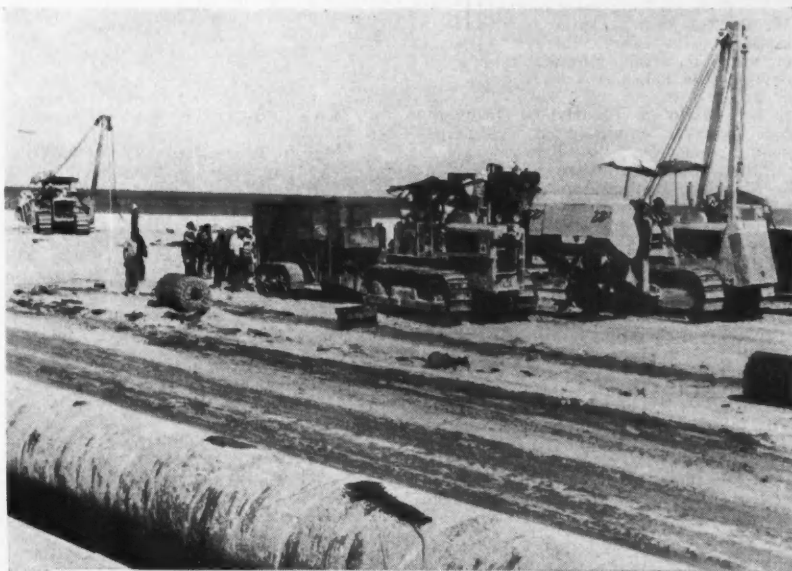
The contractors for the survey, planning and laying of the pipeline were International Marine Constructors C.A., of Aberdeen, a subsidiary of the Collins Organisation, whose London offices are at 18 Park Street, W.1.

SAVING ON ASWAN DAM

Means have been devised of reducing the cost of the first stage of the Aswan Dam by 10 per cent., about £36m., said Mr. Novikov, Russian Minister for Power Station Construction, recently. The amount saved would remain at the disposal of the United Arab Republic.

During the first year of the project, between 120 and 150 Soviet experts and technicians would be employed.

It has also been announced in Egypt that Russia has agreed to finance the second stage of the dam. The announcement stated that the Russians would participate in the second stage on the same lines as they did in the first stage of the project, which started on January 9.



Conventional dope and wrapping machine in operation at Khargu Island

Men and Movements

At the annual general meeting of the London Master Builders Association, **Mr. E. J. Cook**, B.Sc., M.I.C.E., M.I.Struct.E., F.I.O.B., was elected president in succession to **Mr. K. J. Pearce**. Mr. Cook is a director of Richard Costain, Ltd., and is responsible for the building activities of the Costain group in the home country. He is also a past president of the Reinforced Concrete Association and a governor of the Brixton School of Building. In 1938 he started in practice on his own as a civil engineer and in the same year founded his own civil engineering business. In 1949 he was invited to join the Costain board and to bring his company into the group. Mr. Cook was elected to the Council of the L.M.B.A. in 1955, to the Executive in 1956, and became junior vice-president in 1957. **Mr. R. F. Mansell**, F.I.O.B., was elected senior vice-president, and **Mr. P. H. Bates**, F.I.O.B., and **Mr. A. R. Mais**, O.B.E., E.R.D., T.D., D.L., B.Sc., junior vice-presidents. **Mr. W. Kirby Laing** was re-elected honorary treasurer.



E. J. COOK

Mr. A. Yorke Saville, managing director of Construction Machinery, Ltd., has succeeded **Mr. E. Burgess**, managing director of the Marshall/Fowler group of companies, as president of The Federation of Manufacturers of Construction Equipment.

Mr. C. H. Spens, M.I.C.E., has been appointed chief engineer of the Ministry of Housing and Local Government in succession to **Sir George McNaughton**, C.B., B.Sc., M.I.C.E., M.I.Mech.E., who is retiring at the end of January. **Mr. R. A. Elliott**, B.Sc., A.M.I.C.E., one of the Ministry's senior engineering inspectors, succeeds Mr. Spens as a deputy chief engineer.

Mr. K. W. Sims has been appointed export promotion manager of C. C. Wakefield and Co., Ltd., parent company of the Castrol Oil Group. Mr. Sims joined the company in 1951 as an industrial oils sales representative.

Mr. J. T. Moncaster has been appointed northern area manager of the building board's division of Bowaters Sales Co., Ltd. He will be operating from Harrogate.

The new president of the Federation of Registered House - Builders, **Mr. E. R. Bowyer**, of Messrs. H. D. Bowyer, Slough, is a past-president of the Southern Counties Federation of Building Trades Employers. He has been a member of the Council of the National Federation of Building Trades Employers for many years.



E. R. BOWYER

The J. I. Case Co., Ltd., the new British subsidiary of the J. I. Case Company, of U.S.A., has appointed **Mr. B. D. Alergant** sales-promotion manager, responsible for the company's publicity.

Wilson Lovatt and Sons, Ltd., have announced that **Sir Maurice E. Adams**, K.B.E., M.I.C.E., F.R.G.S., has been appointed chairman to the company. Sir Maurice joined the company and was appointed a director in June, 1959, and deputy chairman in August, 1959. He succeeds the late **Major H. Leslie B. Lovatt**, O.B.E., M.C. Sir Maurice has for a number of years held the office of civil engineer-in-chief at the Admiralty, which he relinquished prior to joining the company.

The United Kingdom Atomic Energy Authority have announced that **Mr. H. Cartwright**, at present serving as deputy director of industrial power in the Authority's development and engineering group at Risley, becomes director of industrial power. **J. B. Laurie**, B.Sc.(Eng.), M.I.E.E., has taken up the new appointment of general manager (Commercial) at the Production Group Headquarters, Risley.

A number of appointments have been made within the organisation of Hickson and Welch (Holdings), Ltd. **Mr. W. G. Oliver** becomes a director of Hickson and Welch, Ltd., and **Mr. M. N. Salmon** and **Mr. C. D. Cook** have been appointed to the board of Hickson's Timber Impregnation Co. (G.B.), Ltd. **Mr. A. P. Clarke** and **Mr. E. A. S. Price** become directors of Richardson and Starling, Ltd.

Mr. B. C. Cook has recently been appointed technical consultant to the vision network systems division of Wolsey Electronics, Ltd. He will be advising architects, council and civil engineers on their problems concerning communal aerial installations in blocks of flats, and high-density housing developments.



B. C. COOK

Mr. T. P. D. Spens, general manager (administration), Stewarts and Lloyds, Ltd., has been appointed a member of Corby Development Corporation by the Minister of Housing and Local Government.

T. Vickers, Ltd., have appointed **Mr. W. B. Robinson**, at present engineering assistant with Esher (Surrey) U.D.C., as contracts manager. He will take up his new post on February 1.

Mr. Laszlo Szerdahelyi, a Hungarian civil engineer employed in a Budapest planning office, is visiting Britain as a guest of the Roads Campaign Council. Mr. Szerdahelyi was an unsuccessful competitor in the Council's recent "New Ways for London" competition, and he is inspecting London traffic as well as the winning schemes in the competition.

Mobil Oil Co., Ltd., have announced that **Mr. Curtis M. Klaerner** has been appointed a director of the company in place of **Mr. Arthur L. Lanckton**, who has resigned.

Mr. John L. Cross has joined the board of the Exeter Asphalte and Tarpaving Co., Ltd., filling the vacancy caused by the death of **Mr. J. E. Heaton** last July.

A. Jackaman and Son, Ltd., have appointed **Mr. A. W. Coventry** as general manager.

Two Glasgow architects, **Mr. John Wingate** and **Mr. Alastair Calder**, are visiting Germany to study swimming pool design.

(Concluded from page 468)

ampere station transformer supplied from the 34.5-kilovolt lines in the switchyard.

The switchyard is set on the top of a hill some 260ft. above the power station, and for strength reasons a special type of cable, in which the insulation is pressurised with nitrogen gas, had to be used to carry the power from the generator transformers to the switchyard.

The switchyard area is spanned with a series of 36 high-tensile steel towers, each some 85ft. high, which support the bus-bars carrying the incoming and outgoing power circuits. Each circuit is controlled by air-blast circuit breakers which are designed not only to carry normal load currents but to interrupt any fault which might be generated within the system. This type of breaker was chosen for reliability and also because, when the extremely high-fault currents have to be interrupted, the breaking has to be as fast as possible. Further, this type of circuit breaker is most suited to automatic reclosing after transient faults.

To provide power under emergency conditions, a diesel generator of 165-kW. capacity has been installed. This machine is not sufficient to supply all local needs in emergencies but will provide power for essential services.

To ensure a supply of water to the village, penstocks two and three have been tapped and two pumps connected to a common main, each of which is capable of delivering 10,000 gallons an hour through a steel pipe which empties into the village reservoir.

The hydro-electric scheme can be operated by remote control by one man in the control room. From the control desk the power intake gates are operated as are the penstock butterfly valves, and that in the discharge regulator house. From here also the generators are prepared for running, started and synchronised.

Extensive use of instruments allows checks to be made on such important matters as the water levels at the power intakes and at the tailrace. The performance and behaviour of the various items of plant, including the generators, transformers, cables and switchyard equipment, can also be read from the instruments. Power and light for all these various operations is provided by the house service switchgear, which is of the Superform pattern, operating at 400-volt, 50-cycles a.c., or 130-volt d.c. in the case of the direct current auxiliary board.

Contractors

The project was jointly carried out by The English Electric Co., Ltd., and George Wimpey and Co., Ltd. It was designed by the American consulting engineers, Tippetts - Abbott - McCarthy - Stratton, in consultation with engineers of the Turkish State Water Board.

WAR DAMAGE PAYMENTS

The Commission's work in 1959

The War Damage Commission paid out £13½m. during 1959 compared with £19½m. in 1958 and £23½m. in 1957. The average weekly rate of payments in the last quarter of 1959 was £204,000.

The Commission paid £5,565 "cost of works" claims for repairs during the year, and made 1,902 payments on account or as instalments. The amount involved was £11½m. of which nearly £1½m. was for the repair and rebuilding of houses. Other principal items were: Commercial buildings, £2½m.; factories, £1½m.; churches, £3m.; shops, £1½m.

The average amount of each claim paid during 1959 was £2,066 compared with £2,390 in 1958 and £1,930 in 1957. Value payments amounted to £2m., of which £251,000 related to houses.

Total war damage payments made by the Commission now amount to £1,255½m. in 4,732,000 separate payments. Contributions by property owners during and after the war amounted to nearly £200m.

ACTIVE AND STIMULATING YEAR FOR LONDON BUILDERS

"THE London Master Builders Association has had an active and stimulating year," states the report of the Council presented at the annual general meeting of the Association held last Tuesday. "The most difficult feature was perhaps the unexpected delay caused for several months by the sudden and acute shortage of bricks. Everything was done by the Association and the National Federation to assist members in the difficulties of that situation."

Welcoming the increasing activity and developments in the work of the Institute of Builders and notably the new membership and examination structure, the Council states, "the status of individual builders by professional qualification, offered by the Institute, is increasingly important in these days and the Association is glad to give all possible support to the Institute's work along these lines."

The following are further extracts from the report:

Apprenticeship

During the year many employers who had not previously taken part in the Apprenticeship Scheme have accepted boys for training in the various crafts.

Unfortunately this improvement in one section has been offset by the fact that some of the other regular apprentice masters have reduced their apprenticeship strength. The result is that the total intake of apprentices for 1959 is approximately the same as for the previous year.

Further assistance has been received from the National Contractors Group, some of whose members have increased their intake, although this is not necessarily reflected in the London figures, since some apprentices are indentured with other regions.

The policy of dealing with apprenticeship matters by means of personal approach has been continued, with the gratifying result that only two meetings of the Apprenticeship Panel have been necessary.

Much attention has been given to the matter of selection of prospective apprentices. Cases still arise where it has been obvious that the troubles were due to the fact that the apprentice was initially below the desired standard. Many employers have however realised the importance of being selective when interviewing candidates.

There has been a tendency for more applications from boys to be sent, via the Youth Employment Service, direct to the Association and details have been included in the regular circulars. This has enabled the Association to make an initial selection and put forward only candidates of the required standard.

More publicity has been given to some of the crafts other than carpentry and joinery and this has resulted in more applications for the undermanned crafts; for example, the intake of woodworking machinists has increased by nearly 50 per cent.

Recruitment for bricklaying and plumbing has improved but painting and decorating is still well below requirements. Attempts have been made to overcome the prejudices very often put forward by parents and there are signs that more boys are showing an interest in other crafts.

The circumstances applying to the London Region are very different from those in other parts of the country and while the advantages of a national scheme have been obvious, regional autonomy in certain matters is under consideration.

Sponsored Transfer Scheme

In an endeavour to overcome the fears expressed by some of the small firms in engaging an apprentice for the full period

of four or five years, a "sponsored transfer" scheme (in reality a supplement to the existing provisions for transfers) has been proposed. In this way the Association would be able to give assurances that in the event of the employer being unable to continue to train the apprentice by reason only of the shortage of work, a transfer to another firm would be effected. So far the response from members approached has been most encouraging, more than 80 per cent. of the replies indicating approval and assent. It is hoped that the appeal will be extended to all members early in 1960.

The Youth Employment Service has recognised the fact that the Industry is becoming more selective and will not accept boys below standard. The L.C.C.

A READERSHIP SURVEY

"The Contract Journal" is at present undertaking a readership survey.

Readers are invited to assist in this survey and those who obtain their copies from newsagents will find in next week's issue a questionnaire in the form of a reply paid postcard which they are asked to complete and return as soon as possible. Readers who subscribe direct will receive their questionnaire by post at the same time as they receive their copies of the Journal.

The information obtained will be of considerable value to the publishers and will, in turn, prove of benefit to both readers and advertisers.

May we have your co-operation please?

Youth Employment Report paid tribute to the work undertaken by the Apprenticeship Committees and appealed to other industries to adopt this pattern. Co-operation has been received from several county authorities, including the L.C.C., in the matter of following up cases of boys placed to learn a craft, to ensure that they are properly indentured under the National Scheme. In other areas where this assistance has not been forthcoming difficulties have been encountered, and in one locality interest in the industry has declined with the result that some courses at the local technical college have been discontinued for lack of support.

The Association has continued to emphasise that the Industry requires boys who have completed pre-apprenticeship courses of one year at technical colleges or three-year full-time courses at technical schools. There has never been any difficulty in placing them in apprenticeship, and the wastage is negligible, as the boys are interested in their particular craft and have already made up their minds to pursue it before leaving school. During the year the total demands from employers for this type of boy have not been met, and in consequence the education authorities have been asked to increase the number of such courses in the London Region.

Contracts and the Law

There are indications that the policy which has been actively pursued for some time of encouraging local authorities to make use of the R.I.B.A. Standard Conditions is meeting with a considerable degree of success. Cases are continually being taken up with individual authorities where small, but often important, alterations to

clauses are made and in most of these cases some improvement is obtained.

Invitations to tender for the larger contracts on a firm price basis now seem to have become the rule rather than the exception. Isolated cases have been reported in which documentation has been inadequate or there has been unreasonable delay in acceptance or commencement, but generally the position seems to be satisfactory. Little difficulty has been experienced in obtaining co-operation from the suppliers.

The Code of Procedure for Selective Tendering initiated by the Association some six years ago has now been published. The existence of this Code will prove invaluable in the Association's efforts to improve tendering procedure to the benefit not only of members, but also of the professions and the building public.

Concern has been felt during the year at the increase in the volume of work carried out by local authorities' direct labour departments. This is fully shared by the National Federation who have given the matter a great deal of attention. In line with the Federation's policy, a Regional Committee has been set up to obtain information concerning direct labour activities and to watch the position with a view to taking appropriate action.

The Contracts Committee endorsed a number of suggestions put forward by a member which, if adopted by quantity surveyors in the compilation and preparation of Bills of Quantities, would appreciably simplify the work in builders' offices.

The adoption by quantity surveyors of these suggestions, which include the printing of Bills on one side only, the use of semi-transparent paper and of ink with a reasonably high carbon content, and of single sheets fastened with staples in preference to binding, would enable builders to make use of the copying apparatus now available.

The National Federation approved and put the suggestions before the Royal Institution of Chartered Surveyors, who have now issued them in the form of advice to their members.

Several instances have been encountered during the year in which local authorities have sought to include in their building contracts a condition that the contractor may employ only workpeople who are members of trade unions. Apart from the practical difficulty of complying with a requirement of this nature, a question of policy arises which the Association feels it cannot accept, since it seeks to introduce as a condition a political matter which is unrelated to the main purpose of the contract. Negotiations have taken place with certain authorities at least one of which has accepted our contentions and has made appropriate alterations to its standing orders.

ASSOCIATION OF SOMERSET SURVEYORS' GOLDEN JUBILEE

The Association of Somerset Surveyors celebrated the commencement of its 50th year since inauguration by holding a dinner and dance at the Grand Atlantic Hotel, Weston-super-Mare, recently.

The dinner was preceded by the annual general meeting at which Mr. J. H. H. Wilkes, county surveyor of Somerset, was installed as president for the ensuing year. Mr. W. C. S. Harrison was elected chairman.

Guests at the dinner included the Mayor of Weston-super-Mare; Mr. Gerald Holt, chairman of the County Works Committee; Mr. N. B. Clive-Ponsonby-Fane, vice-chairman of the County Works Committee and High Sheriff of the County of Somerset; Mr. J. J. Leeming, county surveyor of Dorset; and Mr. W. S. Payne, county surveyor of Wiltshire.

Mr. Holt, proposing the toast of "The Association," referred to the fact that it was the first of its kind in the country to celebrate its jubilee. The president, replying to the toast, pointed out that one of the Association's founder members, Mr. J. Knight Dunster, was present.

Talking of Safety

by

"DRAGEE"

I WAS standing with John Richards, the general foreman, watching concrete being poured. One of the gang by the mixer had lit a cigarette and was standing tenderly scratching the backs of his hands.

"Who is that?" I asked Richards, nodding in the direction of the scratcher.

"Chap called Brown. Started last Monday." Richards was not a waster of words.

"What's the matter with his hands?"

Richards shrugged. "Got the itch, I should say. Shall I call him over?"

"Yes, please do."

Brown was a tall, well built fellow of about thirty, with the weathered features of the regular outside worker. He glanced round as Richards touched him on the shoulder, and as he came towards me he thrust his hands into his pockets. He was uncomfortably conscious of their condition.

I held out my hand. "Good afternoon. I believe you're a newcomer here—have you worked for us before?"

"No, Guv."

He hesitated, then put out his hand and shook mine. The skin was excessively hard and dry. There were patches of discoloration on the backs of both hands and on the wrists, and there were signs of flaking. His arms were covered by the sleeves of his shirt.

"Where was your last job?"

He mentioned a civil engineering site on the other side of the town.

"They closed down last week," said Richards. "We started five of their men on Monday."

"Well I hope you'll be happy with us," I smiled. "Have you had this trouble for long?" I went on, nodding towards his hands.

He looked at them ruefully.

"It started about six months ago. I nearly lost my job through it, too. The people there thought it was infectious until I got a note from the hospital to say it wasn't."

"Ah—you've been having medical treatment, then?"

"Dragee," who is a practising safety engineer, would welcome subjects for discussion in this column. All names of persons mentioned in these discussions are entirely fictitious. Questions of law are expressed as the author's personal opinions and are not claimed to be authoritative.—EDITOR.

"Yes—for industrial dermatitis. The trouble is, it keeps on clearing up and then coming back again. It's nearly driven me crackers."

"What are you supposed to be doing about it?"

"Oh, the usual business. Ointment, and so on."

"The 'so on' meaning keeping away from irritants?"

He looked away. "A man's got to work," he said, guardedly.

"I agree. But it's possible to work without your health suffering, you know."

"This is my job. I haven't another trade."

"Is it cement that does the mischief?"

He nodded. "So they say. It seems to disappear when I'm away from it."

"I'm sorry about that," I said. "I'm going to have a chat with your foreman and we'll see what can be done about it."

"Thanks, Guv." He nodded briefly and strode away—but not before I had seen a quick look of relief pass across his features.

"Poor devil," I said, as Richards and I walked away together. "This sort of thing is rather apt to hound a man. I want you to try to find him alternative work—away from dry cement. And keep an eye on him, or he may become a really bad case."

"I can fix that all right," said Richards, with unexpected willingness. "I'll give him a job on the hoist for a bit, and later I might try him out on a dumper."

"That's very good of you. Half the battle with these cases is to make the victim feel secure. Once he knows his job's safe he'll be more willing to persist with the treatment."

"I've heard a lot about dermatitis—and seen plenty of it—but I still don't know what it really is."

"Well, not being the family doctor I can't tell you very much about it. I can tell you what the word means though. It's simply 'inflammation of the skin'—nothing more or less. And industrial dermatitis is a term which is used to cover a whole range of troubles which are liable to afflict industrial workers. It usually affects the arms and hands, because they are the parts which are most often in contact with irritants such as acids, alkalis, solvents, and so on."

"You wouldn't find many of those things on a contract site."

"Not as you would in a factory," I agreed, "but there are other ways of contracting dermatitis. Lack of cleanliness, for instance—sometimes due to inadequate washing facilities. Or cleaning the hands and forearms with solvents such as petrol, diesel oil, or paint thinners—which, of course, remove the natural fat. Abrasives will also damage the skin and pave the way to dermatitis. The only answer is—plenty of hot water, soap (or a good industrial cleanser) and reasonably hygienic surroundings. Barrier cream may also help. Some people are abnormally sensitive to certain substances, and I'm afraid there's little we can do about cases of that kind, except to make sure that medical advice is obtained—and acted upon."

"One thing we must always remember. This kind of trouble nearly always has its side effects—anxiety and depression amongst them, and if we can remove those conditions we may be helping the doctor to do his stuff."

"Now I think we'll go along to the office, have a look at Brown's medical note, and check up some of the details."

"BUILDING MATTERS"

In the B.B.C. "Building Matters" series on February 2, Kenneth Hudson will interview some workers in traditional crafts in the West Country, including brick-making and wrought-iron work, to discuss what the future holds for them.

In the same programme "New Techniques and the Trade Unions" will be described by F. Oliver Jayne, industrial relations officer of the National Federation of Building Trades Employers, and discussed by George Lowthian, general secretary of the Amalgamated Union of Building Trades Workers, and Hugh Kelly, general secretary of the Plumbing Trades Union. The chairman will be George Scott.

BUILDING WAGE RATES

The National Joint Council for the Building Industry, at its statutory meeting in London on Jan. 14, reviewed the wage rates of building trades operatives as required by the constitution of the Council, and found that no increase is due under the industry's Sliding Scale Agreement.

The National Joint Council then proceeded to hear evidence on a claim submitted by the unions for an increase in wage rates of 4d. an hour. After full discussion it was decided to refer the claim to a committee for further examination.

FOR THE DIARY

Jan. 28.

Yerbury Foundation Lecture at the T.U.C. Hall, Great Russell Street, W.C., 6.30 p.m. "The Relation between Design and Speed of Building." An American architect and a British builder will speak.

Feb. 2.

Meeting of the North-West Branch of the Reinforced Concrete Association at the College of Technology, Sackville Street, Manchester, at 6 p.m. "The Joint Problem in Precast Reinforced Concrete Structures," by J. A. Derrington, B.Sc.(Eng.), M.I.C.E., A.M.I.Struct.E.

Meeting of the Midlands Counties Branch of the Reinforced Concrete Association at the Birmingham and Midland Institute, Paradise Street, Birmingham, at 6 p.m. "The Design and Construction of the Plymouth Market Hall," by A. P. Mason, B.Sc., M.I.C.E., M.I.Struct.E.

Royal Institute of British Architects, 66 Portland Place, London, W.1, 6 p.m. President's address to students. Criticism by Philip Powell of work submitted for prizes and studentships.

Feb. 4.

Meeting of the East Midlands Association of the Institution of Civil Engineers at the Electricity Showrooms, Leicester, at 5.45 p.m. "Some Recent Advances in the Manufacture of Large Prestressed Concrete Units," by J. H. Vince, A.M.I.C.E.

Feb. 5.

Meeting of the Institution of Highway Engineers at 11 Upper Belgrave Street, London, S.W.1, 5.30 p.m. Paper: "Some Modern Developments in Highway Bridge Design," by C. S. Chettow, B.Sc., M.I.C.E.

Annual dinner and dance of the Contractors Mechanical Plant Engineers (Midlands Branch) at the Chesford Grange Hotel, Kenilworth.

Feb. 9.

Annual dinner of the East Midlands Association of the Institution of Civil Engineers at Nottingham University.

Feb. 17.

Meeting of the Reinforced Concrete Association at 11 Upper Belgrave Street, London,

S.W.1, 6 p.m. "Lightweight Concrete Aggregates," by Prof. R. H. Evans, C.B.E., D.Sc., Ph.D., M.I.C.E., M.I.Mech.E., M.I.Struct.E.

Meeting of the London Building and Engineering Contractors Accident Prevention Group at 97 Horseferry Road, London, S.W.1, 2.30 p.m. "Erection and Dismantling of Heavy Plant and Equipment."

Feb. 17 and 18.

General building safety training course at the Merseyside Building Safety Training Centre, Stopgate Lane, Liverpool, 9.

Feb. 23.

Institution of Plant Engineers. Meeting at the Royal Society of Arts, John Adam Street, London, W.C.2, at 7 p.m. "Some Problems in the Design of Large Rocket-Engine Test Beds," by R. H. B. Forster, B.Sc., M.I.Mech.E., chief engineer, and L. Breen, senior engineer, British Oxygen Wimpey, Ltd.

March 4.

Institution of Highway Engineers. Meeting at the Institution of Structural Engineers, 11 Upper Belgrave Street, London, S.W.1, at 5.30 p.m. "New Methods of Automatic Traffic Control," by E. Bailey and E. Thorpe. Automatic Telephone and Electric Co., Ltd.

GOLIATH CRANE LIFTS 385 TONS AT HINKLEY POINT

THE 250ft. high 400-ton Goliath crane which runs on its own rails and straddles the reactor building at the Hinkley Point atomic power station site, Bridgwater, Somerset, recently made a lift of 385 tons in positioning the steel shell of a steam-raising unit.

This is the first to be installed of the twelve steam-raising units which will provide power to drive the station's turbo-alternators. Each unit is 90ft. long, 21½ft. in diameter, and when equipped for operation, with its complex of internal tubing over 27 miles in length, will weigh 1,200 tons.

It is now two years since work began at Hinkley Point, where the world's first 500-MW atomic power station, which is being erected by the English Electric-Babcock and Wilcox-Taylor Woodrow Atomic Power Group for the Central Electricity Generating Board.

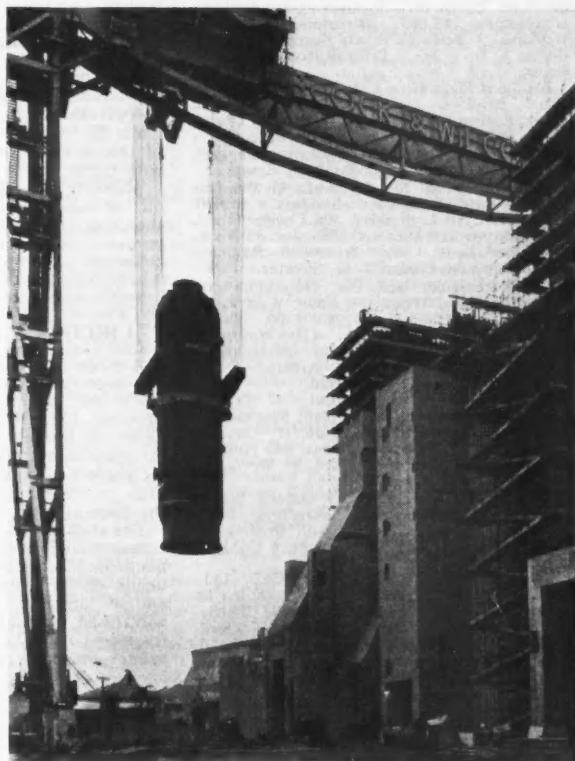
The first reactor will become critical towards the end of 1961 and the station is expected to be in commission in 1962.

Fabrication in site workshops is going ahead on the second, third, and fourth steam raising units. The mechanical engineering phase of work at the site is now in full swing, and the civil engineering work is nearing completion. Already some 235,000 cu. yd. of concrete have been placed out of the 300,000 cu. yd. required for foundations, reactor buildings, turbine hall, etc.

During the past year, progress has in-

cluded the launching and installation at a point 2,000ft. off-shore of the cooling water intake caisson, through which water will be pumped along two underwater tunnels to the station at the rate of 35,000,000 gallons an hour. Construction of the turbine hall, to be the largest in Europe, and its extension buildings is also far advanced.

Manufacture is well under way, at factories at Rugby, Stafford and Liverpool, of the steam turbo-alternators, condenser units, and other electrical equipment which, together with all the steam-raising equipment, is being shipped to Combwich, a new port specially constructed by the Group for the delivery of heavy equipment.



The first of the 12 steam raising units being lifted into position

LIGHTWEIGHT FIRE PROTECTION FOR STRUCTURAL STEELWORK

THE many factors involved in using a lightweight cladding for the protection of steelwork against fire in buildings, instead of the traditional dense concrete, are comprehensively dealt with in a new Paper entitled: "A Report on Lightweight Fire Protection for Structural Steelwork."

The Paper—by Frederick S. Snow and Partners, consulting engineers—shows how the excessive weight of concrete, regarded in the past as an accepted handicap, can be overcome economically and efficiently by the use of vermiculite gypsum plaster applied to metal lathing. The effect of using this type of fire protection on the design of the steelwork is examined in the light of the revised B.S. 449:1959, and a price comparison with concrete shows that a saving of at least eight per cent. can normally be expected.

In addition, the advantages in speed to be gained by transferring the task of fire protection from the steel fixer and con-

cretor to the plasterer, from the preliminary trades to one of the finishing trades, are discussed.

Part two of the study gives details and drawings of various metal lathing systems and data which architects and engineers will require when designing or specifying vermiculite gypsum plaster for fire protection. By lowering the gross weight of the building and by reducing the cost of fire protection, this development points the way to more efficient and economical use of steelwork in multi-storey buildings, says the Paper.

The study was sponsored by a consortium consisting of the following organisations: The British Constructional Steelwork Association; The Expanded Metal Co., Ltd.; The Gotham Group of Companies; Mandoval, Ltd.; Pollock Bros. (London), Ltd.; W. J. Roberts and Sons, Ltd.; A. C. V. Telling.

Copies of the Paper are available from Room 1, Fifth Floor, Windsor House, 83 Kingsway, London, W.C.2.

SCOTTISH PLANT OWNERS' DINNER

From our Scottish Representative

THE annual dinner of the Scottish Plant Owners' Association held in Glasgow was again a notable occasion with large parties attending from all the major Scottish plant firms. The principal guest, the Hon. Lord Cameron, maintained the very high standard set by previous guests and the chairman, Mr. Niall D. Hodge, was again a most popular and acceptable and pointed speaker.

Proposing the toast of the Association, Lord Cameron said the value such an association lay in the provision of a forum, a platform and a body for contact with the Government authorities. As an industry they were concerned with heavy and valuable plant which could only be justified if in continuous use. It was in the interests of all concerned that this should be so and he could not help thinking that the Scottish Highlands offered immense scope for such use.

Communications were the root of economic prosperity; the plant, men and will were all there to provide the communications which would assist all industry.

More Contracts Required

Mr. Niall Hodge, replying to the toast, said the Government did not seem to have grasped the immense potential of modern plant or understand the great speed with which it worked. Many more contracts were required if the available plant were to be used to full advantage; this was especially so in view of the restrictions which had been applied to opencast mining.

The plant industry with its present capacity could do much to improve the lot of all mankind, not only at home but abroad and it was surely the duty of the leaders of the nation to make certain that the opportunity was indeed offered to use the resources which were available.

Mr. Hodge paid tribute to the successful operation of the lecture course staged by Glasgow University and also offered the Association's best wishes to Mr. Frank Lilley, past president and prominent Glasgow contractor, on his success in the 1959 Parliamentary elections. The dinner—itsself a most excellent occasion—was honoured by representatives from the associated crafts and trades in Scotland, by representatives from the Institutions and from the Scottish staff of the Ministry of Works.

LANCASTER BY-PASS NEARING COMPLETION

Unless abnormal weather conditions cause a hold-up, Lancaster By-pass is expected to be opened to traffic by Easter—a few weeks ahead of schedule. At present more than half of the hard shoulders of the road have been finished, but the carriageway is very nearly completed.

Following last week's meeting of the County Highways and Bridges Committee, it was announced that the committee have decided to recommend to the Minister a £100,000 plan to lift and widen the A.588, running from Poulton-le-Fylde to Lancaster, at Cockerham Marsh. The scheme is designed to stop flooding.

ROYAL SOCIETY OF HEALTH CONGRESS

Among the papers to be read at this year's Royal Society of Health annual congress are: "The Design of Housing," by Alfred Hutchings, engineer and surveyor of Cuckfield R.D.C.; and "The Use of Modern Gas Equipment in Blocks of Flats and Other Large Buildings," by D. R. Wills, head of the space heating laboratory, and N. R. Junkison, manager of the H.Q. Division, North Thames Gas Board.

The congress will be held at Torquay from April 25 to 29.

Trade Section

NEW COMPANIES

The undermentioned particulars of new companies recently registered are taken from the daily register compiled by Jordan and Sons, Ltd., company registration agents, 116 Chancery Lane, London, W.C.2:—

R. Hitchins and Co., Ltd., 324-5 High Holborn, London, W.C.1, builders. £100. Directors: Raymond Hitchins and Mrs. Kathleen F. Hitchins, Westfield Lodge, Grubbs Lane, Hatfield, Herts.

Sulham Building Co., Ltd. £3,000. Directors: John D. Wheeler, 45 Lower Belgrave Street, London, S.W.1; Michael Moon, Sulham House, Pangbourne, Berks.

D. and H. Builders (Bournemouth), Ltd., 161 Irving Road, Southbourne, Bournemouth. £2,000. Permanent directors: Dennis W. Clarke and Mrs. Helen K. Clarke, 78 Southbourne, Overcliffe Drive, Southbourne, Bournemouth.

A. C. Harper, Ltd., 42 Palace Avenue, Paignton, builders. £100. Directors: Bernard Brown, Pentire, Dartmouth Road, Paignton; Anthony C. Harper, Lavenham, 25 Beverley Rise, Brixham.

Wilcox Bros. (Hire), Ltd., Bridge Villa, Draycott Road, Tean, Stoke-on-Trent, excavating contractors, manufacturers of and dealers in and hirers of plant, apparatus, etc. £2,000. Permanent directors: George R. Wilcox, 6 Hammersley Hayes, Cheadle, Stoke-on-Trent; John E. Wilcox, Bridge Villa, Draycott Road, Tean, Stoke-on-Trent; Roy Wilcox and Harold Bolton.

Barber Construction Co., Ltd. £1,000. Permanent director: Roger W. Barber, Little Acre, Shilton Road, Barwell, Leics.

Dryden and Kennedy, Ltd., 25 North Street, Goole, Yorks, building and roofing contractors. £4,000. Directors: Charles E. Kennedy, 71 Marshfield Road, Goole; William Dryden, 10 Hawthorn Terrace, Goole; Harold Morris and Harry Morris.

T. L. and D. Jones (Kent), Ltd., 11-12 Wrotham Road, Gravesend, Kent, builders and contractors. £2,000. Directors: Tudor L. Jones and Della Jones, 27 Hillview Road, New Barn, Longfield, Kent.

D. V. Roper (Bishop Auckland), Ltd., Bondgate, Bishop Auckland, Durham, builders and contractors. £5,000. Directors: Desmond V. Roper and Joan Roper, 12 Newlands Avenue, Bishop Auckland.

Riverwood Construction Co., Ltd., building contractors. £100. Directors: Edwin A. B. Coxhead and Mrs. Valerie A. Coxhead, Alison Cottage, Quarry Woods, Bisham, near Marlow, Berks.

Coven Construction Co., Ltd., prefabricated and sectional buildings. £1,500. Permanent directors: Benjamin Hughes (managing director) and Ada E. Hughes, Elm Park House, Clarkes Lane, Willenhall.

Astbury, Blythe (Builders), Ltd., 11, 13 Baker Street, Portman Square, London, W.1. £100. Directors: Derek R. Ward, Timberscombe, Dixons Hill Road, North Mymms; James S. Wade, Warren Park, Kentish Lane, Hatfield; Rita M. Ward and Jean Wade.

C.M.E. Developments, Ltd., Hanger Lane, Station Office, Ealing, London, W.5, builders. £300. Directors: Thomas H. Wildig, 31 Clay Lane, Bushey, Herts; David Shaw, 62 Woodstock Drive, Ickenham; Sydney Gardner, 25 Alexandra Close, South Harrow.

Site Improvements (Developments), Ltd. £100. Directors not named. Subscribers: Jeremy P. Raisman and M. J. H. Marshall, 11 Old Jewry, London, E.C.2.

Site Improvements, Ltd. £100. Directors: to be appointed by the subscribers. Subscribers: F. Thompson and Jeremy P. Raisman, 11 Old Jewry, London, E.C.2.

C. G. Robertson (Farnham), Ltd., 51 Lady-mead, Guildford, Surrey, builders. £1,000. Directors: Charles G. Robertson, The Cairns, Chantry View Road, Guildford, Surrey; Mrs. Elizabeth M. Robertson, The Cairns, Chantry View Road, Guildford, Surrey.

Wildridge (Burnham), Ltd., 7 Britwell Road, Burnham, Bucks, civil engineering and building contractors. £5,000. Directors: Adrian R. Williams, 7 Britwell Road, Burnham, Bucks; Gerald A. Doddridge, 7 Britwell Road, Burnham, Bucks.

Blainnett Plant Hire, Ltd., 4 Highcliffe Road, South Benfleet, Essex. £2,000. Directors: Albert E. Bennett, 48 Ash Road, Canvey Island, Essex; William D. Blainley, St. Dominic, Coker Road, Canvey Island, Essex; Gordon Bennett, 4 Highcliffe Road, South Benfleet, Essex.

C. F. and V. R. Slowley, Ltd., 41 Windsor Road, Castle Bromwich, builders. £1,000. Directors: Cyril L. Slowley, 396 Chester Road, Castle Bromwich; Victor G. Slowley, 34 Bucklands End Lane, Castle Bromwich; Reginald V. Slowley and Frederick G. Slowley.

H. Barraclough and Son (Morley), Ltd., Westerton Farm, Westerton Road, West Ardsley, near Wakefield, builders. £500. Directors: Hartley Barraclough, 431 Westerton Road, West Ardsley; Alan H. Barraclough, 431 Westerton Road, West Ardsley; Lilian Barraclough, address not stated.

Rok-Crete (Plant Hire), Ltd., 47 Frinton Road, Clacton-on-Sea, Essex, plant hire specialists. £500. Directors: Claude H. Chaston and Vera M. E. Chaston, Saxons, 105 Holland Road, Clacton-on-Sea; Bernard S. Woodman and Douglas A. Bareham.

Terra Plant Hire, Ltd., 13 Oxford Street, Weston-super-Mare. £1,000. Directors: Brian A. Sheppard, 51 Hulse Road, Brislington, Bristol, 8; Raymond S. G. Bemant, 8 Oakfield Road, Bristol, 8.

Brace-Pinhorne Construction Co., Ltd., builders. £100. Directors to be appointed by subscribers. Subscribers: Malcolm R. Chettleburgh, Merravay, Hill Avenue, Wickford, Essex; Roland J. Chettleburgh, 4 Burrow Road, Chigwell, Essex (company directors).

N. F. Blake (Builders), Ltd., 7 Berkshire Gardens, Angel Road, London, N.18. £100. Directors: Nicholas Blake and Mrs. Florence E. Blake, 7 Berkshire Gardens, Angel Road, London, N.18.

D. and J. Plant Hire, Ltd., 2 Bentwick Street, London, W.1. £1,000. Directors: Derek Anderson and Jennifer Anderson, 543 Bath Road, Longford, Middx.

VOKES' NEW COMPRESSED AIR FILTER

A COMPRESSED air pipeline filter, with a transparent bowl and a choice of element to give performance according to requirements, has been introduced by Vokes, Ltd., Henley Park, Guildford, Surrey, for use with $\frac{1}{4}$ in., $\frac{1}{2}$ in. and $\frac{3}{4}$ in. air lines.

Designed to protect air-using equipment by the continuous removal of abrasive pipe scale, solids, and corrosive moisture from the supply air, the filter is equipped with a standard general-purpose element suitable for the removal of average concentrations of water or oil mist. The alternative element, which is interchangeable, is for applications where oil or water mist removal is of primary importance and a high degree of purity is necessary.

A die-cast, light alloy head-casting houses the filter element, which can be removed by unscrewing one nut, and a ribbed clamp ring mating with a thread on the head is employed to fit a transparent plastic bowl available in two different capacities. The standard unit is capable of operation at pressures up to 150 p.s.i. Units for operation at pressures in excess of this and up to 250 p.s.i. are supplied with metal bowls.

Moisture and impurities may be drained off by removal of a plug at the base of the filter, which has a static zone incorporated to prevent reentrainment of collected contaminant.

CIRCULAR DUCT FITTINGS

A range of circular duct fittings suitable for high velocity air conditioning duct work has been introduced by Wilmot Breeden, Ltd., Birmingham. The components are formed in metal dies from sheet materials and are welded together to form a complete assembly. There are no joints, folds or other projections to interfere with the fluid stream.

The standard range, known as the Velflo range, includes 90, 60, 45 and 30 degree bends in 1D and 1½D throat radii, and twin bends of the same throat radii at 90, 60 and 45 degrees. The bends are hot-dip galvanised as standard finish, but other treatments such as plastic coating, paint or primer finishes can be provided.

NEW METAL CLADDING

A new profiled vertical cladding material, the Pillar Panel, has been introduced by the Cellactite Co., Ltd., Whitehall Place, Gravesend, Kent. Manufactured in fire-resisting protected metal, it is designed to be spaced at any interval between Cellactite corrugated sheets.

The standard colour finishes are green, russet and aluminium, but other colours are available. These may be applied to weatherside, underside, or both sides of the panel. The natural colour is black.

TRADE NEWS IN BRIEF

Aidu Equipment Co., Ltd., announce that they have moved from Epping to 105-129 Markfield Road, Tottenham, London, N.15 (telephone: Tottenham 0401).

Bakelite, Ltd., announce the publication of Advance Information Sheet B.36 entitled "Bakelite Phenolic Resin Foams." This gives details of a low-density cellular material recently developed for use in thermal insulation and as a lightweight core material for building panels. Information is also given on the special machines which have been developed for rapid mixing and dispensing of the foams.

The London address of Haine and Corry, Ltd., is now 15 Buckingham Palace Gardens, Buckingham Palace Road, S.W.1 (tel: Sloane 0746).

Truscon have moved their Birmingham reinforced concrete office to a new office building—George House, George Road, Birmingham. 15. Telephone: Edgbaston 4391/2/3.



This new head office building was recently completed for John Trelawny, Ltd., at Queensway Trading Estate, Leamington Spa, Warwickshire, on the same site as their associated company, B.G.O., Ltd., manufacturers of spare parts for crawler tractors and other products such as compressed air tools. Now a large stores building and an extension for installation of mechanical handling equipment are being erected.

Current Constructional Activities

PROJECTS • CONTRACTS • AWARDS

THIS editorial feature provides readers with a comprehensive news service covering forthcoming private and public construction work. Commencing on this page information is given concerning future projects followed by details of tenders being invited. In the third section will be found news of tenders recommended for acceptance, tenders accepted and contracts awarded. Attention is also drawn to the advertisements covering contracts and appointments appearing in the front part of the *Journal*.

BUILDING AND DECORATING

(See also Housing Schemes)

Berwick, Northumb.—Pringle of Scotland, Ltd., are to extend their factory on Tweedmouth trading estate.

Bishop Auckland, Dur.—U.D.C. Surveyor has prepared scheme for the construction of a bus station at North Bondgate. Estimated cost £22,000.

The Methodist Church are to erect a church, hall, and vestries in Proudfoot Drive, at a cost of £18,000.

Cheltenham, Glos.—B.C. recommended to approve the erection of a branch library at corner of Goldsmith Avenue, Hester's Way. Estimated cost £26,000.

Chester.—Liverpool Regional Hospital Board have approved revised estimated cost of £318,453 for new out-patient and casualty department at Chester Royal Infirmary, for submission to the Ministry.

Chorley, Lancs.—Ministry have granted planning permission for the erection of a C. of E. Secondary School near Rookwood Avenue and Astley Road, for the Lancs. C.C. Estimated cost £100,000.

Consett, Dur.—Carricks (Caterers), Ltd., 47 Grey Street, Newcastle upon Tyne, are to erect a transport depot of 3,500 sq. ft. in Gibson Street, and outline plans have been approved; an amenity and canteen block is to be built for the Consett Iron Co., Ltd.

U.D.C. received an inquiry from the firm of Lorra-Lite, Ltd., about the erection of a factory in the Consett area, and negotiations are proceeding.

Crewe, Ches.—B.C. to prepare detailed plans for the new public library, estimated cost £88,000; have approved in principle plans for proposed new works and stores department at site north of Henry Street.

Durham.—The Durham Light Infantry, Brandon Colliery are in touch with the City Council for the acquisition of a site at Old Elvet, for the erection of regimental headquarters.

Following new schedule, included in the E.C.'s 1960-61 programme are to be built in £1a.s.p. construction: Cleadon Junior School, Peterlee Shotton Hall Junior School, Peterlee Shotton Hall Secondary School, and Annfield Plain Day School.

Plans are being considered for the erection of a Methodist Church at Front Street, Cassop colliery for the Trustees of the Cassop Methodist church. The architect is J. Wilson Hays, Central Chambers, Wingate, Co. Durham.

Felling, Dur.—Outline plans by M. Grady (Newcastle), Ltd., 74 Broadwood Road, Newcastle upon Tyne for the erection of houses at the rear of Windy Nook Road have been approved; William Leech, Ltd., St. James Street, Newcastle upon Tyne, are to erect three-storey houses at Heworth Grange Farm, Heworth.

Felling-on-Tyne, Dur.—A. R. Pittendrigh, 19 Claremont Place, Newcastle upon Tyne, has been appointed structural engineer by U.D.C. for the erection of new swimming baths to cost about £200,000. The architects are J. H. Napper and Partners, 56 Eldon Place, Newcastle upon Tyne. It is hoped to start work on the scheme in 1961.

Gateshead, Dur.—Outline plans have been approved for the erection of eight shops with office accommodation above on the site of the Scala Cinema, High Street, for Scala (Gateshead) Property, Ltd. The architects are

Marshall and Tweedy, 36 Blackett Street, Newcastle upon Tyne; A. S. McHugh, Ltd., 46 Sandhill, Newcastle upon Tyne are seeking permission to erect offices, showroom and warehouse at South Shore Road.

Guildford, Surrey.—C.C. recommended to approve sketch plans for extensions and adaptations to provide two additional classrooms, hall, staffroom, boiler house, etc., at Burpham County Primary School. Estimated cost £21,725.

Heckmondwike, Yorks.—Outline application granted to F. W. Woolworth and Co., Ltd., to prepare detailed plans for retail store at the junction of Market Street and Blanket Hall Street.

Hertford.—B.C. have approved scheme for the provision of an industrial estate of 23 factories at Caxton Hill, Ware Road.

Hexham, Northumb.—U.D.C. have approved in principle, the construction of a new swimming pool.

William Robb and Son, Ltd., Fore Street, are to build a new store of 40,000 sq. ft. housing 30 departments.

Hull.—Town Planning Committee have approved conversion of the Curzon Cinema into a supermarket, for Clifford Dunn, 75 Wolfreton Lane, Willerby.

Isleworth, Middx.—Co. E.C. have approved a proposal to re-build the Isleworth Blue (C.E.) School. Estimated cost £66,000.

Jarrow, Dur.—Newcastle upon Tyne Regional Hospital Board, are to spend £13,600 on extensions to Danesfield Maternity Home, Bede Burn Road. The cost includes £2,000 for central heating.

Jedburgh, Roxburghs.—B.C. have approved the appointment of Alan Reisch, architect, of Reisch and Cowan, 22 Ainslie Place, Edinburgh, to re-plan the town.

Kirkintilloch, Dunbarton.—Scottish Home Department have approved, in principle, a scheme to construct a swimming pool at Woodhead Park, for B.C. John Wingate and Alastair Calder, Glasgow, are the architects. Estimated cost £100,000.

Liverpool.—Shaftesbury Hotel, Mount Pleasant, is to be rebuilt. Estimated cost between £70,000-£100,000.

Lowestoft, Suffolk.—B.C. recommended to approve the inclusion in the 1960/61 programme of schemes for the erection of public conveniences at Royal Plain and Kirkley Cemetery. Estimated cost £10,000 and £1,000, respectively.

Lurgan, Armagh.—B.C. have approved plans for the construction of an open-air swimming pool at Lurgan Park. Estimated cost £10,000.

Lyme Regis, Dorset.—B.C. recommended to prepare plans for the restoration of the west wing of the Museum. Estimated cost £3,750.

Macclesfield, Ches.—B.C. propose the erection of a factory at Hurdfield new industrial estate to be leased to W. Hargreaves and Co., Ltd. Estimated cost £40,000.

Matlock, Derbys.—U.D.C. are considering plans for the provision of an elevated car park over the town's bus station to accommodate 200 to 300 cars.

The Gilkes Street Methodist Church are seeking a site, for the erection of a new church. E.C. to spend £6,430 on the construction of pavilion at Tollesby playing field. No contracts let.

Newburn, Northumb.—U.D.C. to build shops on the Mount Pleasant estate, Throckley. Surveyor preparing plans and estimates for proposed swimming baths.

Newcastle upon Tyne.—E.C. have submitted sketch plans for additions to Bath Lane College to the M.E. for consideration. It is proposed to commence the work during 1960-61. The architects are W. B. Edwards and Partners, 5-6 Claremont Buildings, Newcastle upon Tyne.

Charles G. S. Buist, Ltd., St. Mary's Place, are to erect new headquarters at Etherstone Avenue, Cochrane Park. The premises, covering 60,000 sq. ft., will comprise showrooms, workshops, filing station and offices. Planning permission has been granted. The architects are Cackett, Burns Dick and MacKellar, 21 Ellison Place, Newcastle upon Tyne.

Plans have been prepared by Southern and Toes, 217 Goldspink Lane, for the construction of restaurant at 52 Clayton Street, for Fong Wah. M. Jackson and Son (Clothing), Ltd., are to erect shop and offices at 84-8

Westgate Road. The architects are Stephenson, Gillis and Partners, 2 Saville Chambers, North Street, Newcastle upon Tyne. S. N. Slipper, Education Offices, Northumberland Road, has prepared scheme for additional classroom at St. Theresa's R.C. School, Heaton Road, for the Rev. Pollock. It is proposed to rebuild the Labour Party meeting hall at Hexham Avenue, to plans by R. C. Steel, 90 Westmorland Road.

Northallerton, Yorks.—T. Barrett, Sons and Partners, 84 Grange Road, Middlesbrough, have been appointed quantity surveyors, by Newcastle Regional Hospital Board, for providing additional accommodation for nurses at Friarage Hospital. P. H. Knighton, chief architect.

Northumberland.—C.C. proposes branch libraries at Haltwhistle and Longbenton at £15,000 each.

County Welfare Committee to spend £50,000 on the erection of a home for handicapped persons at Morpeth; have approved an estimate amounting to £65,000 for the erection of old people's home at Whitley Bay.

C.C. have approved sketch plans for residential and teaching block at Kirkley Hall Farm Institute to cost £33,000. Plans are being prepared for health centre at Brunton Park, for the C.C.

Paisley, Renfrews.—Dean of Guild Court have approved plans for a factory at Hawkhead, for R. F. Morrison and Co., 106 Crow Road, Glasgow.

Prudhoe, Northumb.—U.D.C. to convert Rex Cinema into an indoor swimming pool. Vaux and Associated Breweries, Ltd., Sunderland, are in touch with the local authority about the purchase of a site at West Wylam for the erection of a hotel.

Scarborough, Yorks.—B.C. recommended to approve, for inclusion in the capital programme for 1960-61, the erection of 30 lock-up garages at Eastfield and six at Barrowcliff. Estimated cost £3,600 and £720, respectively.

South Shields, Dur.—B.C. to demolish premises in Green Street, occupied by Radiant Fireplaces, Ltd., and Orange Brothers, and will erect new premises for the firms.

E.C. considering the appointment of an architect for the Stanhope County Secondary School; plans by J. Smeds, 56a Camden Street, North Shields, for the erection of a dining room and kitchen at the Grammar/Technical School have been submitted to the M.E. for consideration; a Congregational church is proposed on the Whiteleas housing site; plans approved for shop at the Simonside Works of Wright and Weaire, Ltd., (the architects are Newrick and Blackbell, 58 John Street, Sunderland); J. H. Morton and Son, Martins Bank Chambers, Fowler Street, prepared plans for workshop at Templeton, for Thompson, Eyres and Clunie, Ltd., Pilgrim Street, Newcastle upon Tyne; Dunns Garages (Sunderland), Ltd., are to erect car showroom and service depot at Dean Road (the architects are Page, Son and Hill, 75 King Street); Newman, Ltd., are planning further extensions to their clothing factory at Commercial Road, and negotiations are in hand for the purchase of the necessary land.

Stoke-on-Trent, Staffs.—City Council recommended to obtain tenders for the provision of three community halls to serve Abbey Hulton, Smallthorne and Norton Ball Green areas. Estimated cost £33,700.

Street, Som.—Co. E.C. recommended to invite tenders from selected contractors and appoint Venning Hope and Partners, 16 The Crescent, Taunton, as quantity surveyors for the erection of the new secondary modern school and area college.

Stretford, Lancs.—B.C. recommended to apply for sanction to borrow £1,460 for the erection of a further 10 garages at the rear of Chatsworth Road.

Sunderland, Dur.—E.C. to spend £19,000 on additions to Havelock Junior School, and £17,000 on the construction of a community centre on Hylton Red House estate; S. I. Stephenson, Gillis and Partners, Saville Chambers, Newcastle upon Tyne, have prepared plans for new shop fronts at Vine Place and Crowtree Road for Books (Fashions), Ltd.; E.C. to negotiate for land in Leechmere Road for the erection of R.C. secondary modern school; E. M. Lawson, Barras Buildings, Barras Bridge, Newcastle

upon Tyne, has prepared plans for alterations and improvements to the Roker Hotel, Roker Terrace, for J. W. Cameron and Co., Ltd.; Newrick and Blackbell, 58 John Street, are the architects for shop and residential accommodation on the Hylton Castle estate for L. R. Quenett; F. M. Owsnett, Lloyds Bank Chambers, Fawcett Street, has been appointed consulting engineer by the B.C. for the erection of a mental health occupation centre at Plains Farm.

B.C. to build a child welfare clinic and school medical services centre on the Hylton Castle estate. Working drawings are to be prepared, and tenders obtained in April.

F. Clark, Olive Street, have acquired adjoining premises for extensions; S. W. Milburn and Partners, 9 Esplanade, are the architects for factory at Sunderland for the Sixty Minute Cleaners, Ltd.

Torquay, Devon.—Bills of quantities are being prepared for the rebuilding of a section of the existing store at 14 The Strand, for Bobby and Co., Ltd., Healing and Overbury, Rodney Lodge, Rodney Road, Cheltenham, are the architects; L. A. Francis and Sons, Vernon House, Sicilian Avenue, Bloomsbury Square, London, W.C.1, the quantity surveyors; and R. H. Thomason, Eaton Corner, Cobham, Surrey, the structural engineer for the scheme. Estimated cost £85,000.

Twickenham, Middx.—B.C. propose to erect a new central library during the year 1961-62. Estimated cost £200,000.

Walsend, Northumb.—John T. Bell and Sons, Ltd., Market Street Chambers, Newcastle upon Tyne, have bought the Royal Cinema, High Street, and propose erecting shops on the site at a cost of £40,000; John Twinn, Ltd., Allerdale House, Brigham, Cumberland, are seeking permission to erect workshops and offices at Middle Engine Lane; Commercial Plastics, Ltd., Stephenson Street, are to erect new laboratory block and new factory building, and have prepared their own plans; The Eldorado Ice Cream Co., Ltd., London, have prepared plans for alterations and additions to their depot at Oak Grove.

Walsall, Staffs.—B.C. recommended to apply for sanction to borrow £14,000 for the erection of a maternity and child welfare centre at Ross Road, Coalpool, and £22,600 for the construction of a church hall at Church Square.

Baths Committee considering scheme for the reconstruction of the Reedswood Park open-air swimming baths. Estimated cost £9,000.

West Hartlepool, Dur.—Iddison and Johnson, 27 Woodlands Road, Darlington, have been appointed quantity surveyors by the R.C. authorities for the St. Bede's R.C. Boys' Secondary School. The architect is T. A. Crawford, 80 Borough Road, Middlesbrough. Tenders to be invited shortly.

T. A. Crawford, 80 Borough Road, Middlesbrough, has prepared sketch plans for two classrooms at St. Cuthbert's R.C. School.

West Riding.—E.C. have approved, for inclusion in next year's minor building programme, the following: Blacker Hill Primary School—conversion of play shed into a kitchen, dining room and free space, £3,200; Worsbrough Dale Junior Mixed School—access to the new West Riding classroom, £580; Birdsedge Primary School, Denby Dale—toilet improvements, £4,000; Keresforth Road Secondary School, Dodworth—first phase of rehabilitation, £20,000; Darton Boys' Secondary School—additional teaching space (two classrooms, laboratory, art room, toilets), £20,000; Woolley County School—additional teaching space (rehabilitation to include temporary double West Riding classroom unit), £10,000.

Whitehaven, Cumb.—West Cumberland Industrial Development Co., Ltd., Roper Street, Whitehaven, are to carry out a 6,000 sq. ft. factory extension, for Marchon Products, Ltd. The industrial development company's architects are R. Ward and Partners, 29 Chesham Place, Belgrave Square, London, S.W.1.

Whitley Bay, Northumb.—Waring and Netts, 36 Jesmond Road, Newcastle upon Tyne, have prepared plans on behalf of M. J. Liddell and Sons, Great North Road, Newcastle, for the erection of 12 shops, Post Office, bank, five flats above shops, and self-service store at Claremont Road on the Whitley Lodge estate. Waring and Netts are also the architects for a petrol filling station fronting the Links.

C.C. planning the erection of a child welfare centre at Chapel Lane.

Workington, Cumb.—B.C. recommended to submit layout plans for the development of land at Westfield Drive for the erection of four shops.

Yeovil, Som.—Co. E.C. recommended to invite tenders from selected contractors for the erection of phase two of the technical college.

ELECTRICAL

Scarborough, Yorks.—B.C. recommended to approve for inclusion in the capital programme for 1960-61 re-wiring and installation of addi-

tional electric lighting for Council houses at Northstead estate. Estimated cost £5,800.

Wakefield, Yorks.—C.C. recommended to approve the extension of fluorescent lighting throughout the whole of the Registry and Deeds premises. Estimated cost £1,120.

Wallingford, Berks.—Oxford Regional Hospital Board have approved the provision of a bed lift at St. Mary's Hospital. Estimated cost £4,315.

FENCING

Rossington, Yorks.—West Riding C.C. recommended to approve the fencing of a site acquired for the proposed Rossington Torne-dale Infants' School. Estimated cost £1,840.

Stretford, Lancs.—B.C. recommended to approve in principle schemes for the provision of new fencing along the canal foot-path at Trafford Park and boundary fencing at Longford Park and Moss Park Recreation Ground. Estimated cost £700, £2,500 and £1,100, respectively.

GAS AND WATER SUPPLY

Barnsley, Yorks.—B.C. recommended to approve scheme for re-laying and extensions of water mains on various sites within the area of detailed supply. Estimated cost £1,515.

Cheltenham, Glos.—Ministry have approved in principle R.D.C.'s scheme for providing a piped water supply to the village of Cowley. Estimated cost £7,900.

Crewe, Ches.—B.C. have approved in principle scheme for the provision of a water supply to various permanent allotment sites. Estimated cost £3,168.

Larne, Antrim.—R.D.C. have submitted to the Ministry preliminary plans of a water supply scheme for Glenarm. Estimated cost £23,000.

Malling, Kent.—R.D.C. have approved the sinking of a borehole at Ryarsh for the Mid-Kent Water Company.

Middlesbrough, Yorks.—The Tees Valley and Cleveland Water Board, Corporation Road, are seeking loan sanction for £506,000 for the installation of extra filtration plant at Lartington, near Barnard Castle. T. S. R. Winter, chief engineer.

Rhyl, Flint.—U.D.C. are preparing plans for water main scheme comprising the laying of one four-mile-long 15in. water main from Bodelyddan to Rhyl and the replacement of the Aled diesel pumping machine. Estimated cost £70,000.

Rochdale, Lancs.—B.C. recommended to apply for sanction to borrow £2,450 for laying of 143yd. of 6in. diameter water main and 686yd. of 4in. diameter main as part of the advance preparation for second phase of building on the Shawclough housing estate.

Shepton Mallet, Som.—Bristol Waterworks Company are preparing scheme to improve water supplies to Southill and Waterlip at Cranmore.

Sowerby Bridge, Yorks.—U.D.C. recommended to apply for sanction to borrow £1,461 for providing town's water supply to houses in Finkle Street, Boulderclough.

HARBOURS, PIERS AND SEA DEFENCE WORKS

Lowestoft, Suffolk.—B.C. recommended to approve the inclusion of the following coast protection schemes in the 1960-61 programme: South Beach groynes scheme, part one, £35,470; South Beach groynes scheme, part two, £33,750; three new groynes north of Ness Point reconstruction groynes one, two and three, north sea wall, £27,200; concrete apron, Ness Point to coastguard station, £8,000; children's corner—toe piles, etc., £8,000.

Middlesbrough, Yorks.—Smith's Dock Co., Ltd., South Bank-on-Tees, are considering a scheme for the construction of a new dry dock 1,000ft. long and 135ft. wide. It is not expected however that the scheme will be proceeded with for some time.

Withernsea, Yorks.—U.D.C. to apply for sanction to borrow £1,250 for repairs to sea defences; John H. Haiste, consulting engineer, 20 Wood Lane, Headingley, Leeds, 6.

HEATING AND VENTILATING

Clitheroe, Lancs.—Manchester Regional Hospital Board Buildings and Works Committee have approved in principle improvements to engineering services at Clitheroe Hospital. Working drawings and bills of quantities to be prepared.

Penistone, Yorks.—West Riding C.C. recommended to approve the installation of an oil-fired heating system at St. John's C.E. (Aided) School. Estimated cost £1,500.

Pudsey, Yorks.—West Riding C.C. recommended to approve installation of heating system using solid fuel at grammar school. Estimated cost £4,000.

Stockport, Ches.—Manchester Regional Hospital Board Buildings and Works Com-

mittee have approved in principle installation of new boiler plant, etc., at Cherry Tree Hospital. Working drawings and bills of quantities to be prepared.

HOUSING SCHEMES

Ash-on-under-Lyne, Lancs.—B.C. recommended to approve designs for erection of houses and three-storey flats at Charlestown.

Bacup, Lancs.—Local Planning Committee have approved the erection of two maisonnettes, with warden's flat above, on the Glen Top estate.

Biggleswade, Beds.—U.D.C. to submit to Ministry for approval housing programme comprising 50 dwellings including 10 old people's bungalows.

Biggleswade, Beds.—R.D.C. to proceed with the erection of 10 houses at Henlow.

Bourne, Lincs.—U.D.C. have approved plans for 10 bungalows at Dyke.

Bridgnorth, Salop.—B.C. recommended to prepare plans for 12 one- or two-bedroom flats at Sydney Cottage estate.

Calne and Chippenham, Wilts.—Air Ministry propose the erection of a further 146 houses and a social centre at Colerne Aerodrome.

R.D.C. have approved layout plan for two bungalows at Dovey's Terrace estate, Kington Langley.

Darlington, Dur.—L. C. Abdale, Ltd., Weir Street, are to erect 33 houses in Norton Back Road, Sadberge. W. Sanders Hutton, Ltd., 43 Coniscliffe Road, have been granted permission to erect houses on 10.7 acres of land at Heighington.

Deventry, Northants.—R.D.C. recommended to approve the erection of 20 bungalows at Braunston, Crick, Dodford, Flore and Weedon Bec.

Dover, Kent.—Town Planning Committee have approved outline application for the erection of 42 almshouses and a social centre at Albany Place, for the Trustees of the Dover Municipal Charities; development for residential purposes of land alongside the Railway Hotel at Kearnsey, for Fremfils, Ltd., Court Street, Faversham.

Housing Committee have approved the erection of 37 flats at Union Row and two blocks of two-storey flats and one bungalow for aged people at the junction of Noah's Ark Road and Goschen Road, during 1960-61. Estimated cost £80,000 and £6,500, respectively.

Durham.—R.D.C. to apply for sanction to borrow £69,714 for erection of 40 houses and 10 bungalows at Kimblesworth.

Durham.—R.D.C. have approved layout plans for about 100 houses at Blue House Farm, for R. E. Coleman, Ltd., Western Hill.

East Suffolk.—C.C. propose the erection of a bungalow for two district nurses at Stowmarket. Estimated cost £3,500.

Gosport, Hants.—B.C. recommended to approve, subject to conditions, plans for 88 houses and bungalows at Jellicoe Avenue, for Percy Bilton, Ltd., Park Lane, London, W.1.

Halesworth, Suffolk.—U.D.C. to erect four houses at Bramfield Road estate.

Harrogate, Yorks.—B.C. recommended to approve plans for erection of a block of six flats with garages at corner of Woodside and Kingsway, for C. E. Morris and Son, 16 Bower Road, and block of flats in Princes Villa Road, for C. E. Cowen (Builders), Ltd., 12 Station Parade.

Hexham, Northumb.—R.D.C. have approved the erection of 30 houses and 20 old people's bungalows this year.

Hexham, Northumb.—R.D.C. to build 30 houses and 20 old people's bungalows this year. The Council's architects are W. Dixon and Son, 1 Collingwood Street, Newcastle upon Tyne.

Kendal, Westmor.—B.C. recommended to approve plans for the erection of block of six two-bedroom flats on land at Kendal Green Hospital. Estimated cost £11,400.

Kesteven.—Standing Joint Committee have approved the erection of a pair of police houses each at Grantham, Sleaford and Stamford, estimated cost £5,900 each; two pairs at Bracebridge Heath, £11,800, and one only at Waddington, £3,200.

Lancaster.—City Council have approved plans submitted by F. B. Jackson, 43 Church Street, for erection of nine pairs of semi-detached houses and 13 lock-up garages on land bounded by Denmark Street, Gerrard Street, Bishopdale Road and Laurel Bank, for R. L. Dilworth, Ltd.

Lowestoft, Suffolk.—B.C. recommended to submit to Ministry for approval, scheme for the provision of 24 flatlets for old people at Gunton estate.

Melford, Suffolk.—R.D.C. to submit to Ministry for approval housing programme comprising 22 dwellings at Long Melford, nine at Bures St. Mary, four at Stoke-by-Nayland, six at Glemsford and 24 at Great Cornard.

Millom, Cumb.—R.D.C. have approved layout for 24 bungalows on the north side of Devonshire Road.

Montrose, Angus.—Dean of Guild Court have approved the erection of nine houses at York Terrace, for B.C. Estimated cost £14,500.

Morpeth, Northumb.—R.D.C. negotiating for the purchase of land at Pegswood for the erection of 150 houses.

Newcastle upon Tyne.—W. H. Oliver, Ltd., Oliver House, Simpson Street, are planning the erection of three-storey block of flats at Walker Road.

Newcastle upon Tyne.—City Council to erect three blocks of flats at Eastfield Avenue, Walker.

Norwich.—Town Planning Committee have approved in principle outline application for the erection of three blocks of flats and 12 lock-up shops at junction of Earham Road and recreation ground, for R. G. Lawrence, Stratton Strawless Hall.

Olney, Yorks.—U.D.C. have invited selected contractors to tender for erection of 30 houses and eight flats on the Weston estate.

Rothwell, Yorks.—U.D.C. have approved layout of cemetery land, Styebank Lane, for housing development, providing for 17 pairs of houses and a road.

Salford, Lancs.—Sutton Dwellings Trust, Victoria House, Southampton Row, London, W.C.1, considering plans prepared by Francis Jones and Son, 178 Oxford Road, Manchester, 13, for erection of 124 dwellings at Sleedley Road. C. W. Davidson and Co., 178 Oxford Road, are the quantity surveyors. Estimated cost £280,000.

Scarborough, Yorks.—B.C. recommended to approve for inclusion in the capital programme for 1960-61 the erection of 100 one-bedroom flats. Estimated cost £168,500.

Southend, Essex.—Ministry have approved the development for residential purposes of ½ acres of land south of the extension of Hudson Road, Eastwood, for H. F. Walker, The Forge, West Street, Leigh-on-Sea.

Stanley, Dur.—Draper Bros., Station Road, Beamish, are to erect 25 houses at Sheephill.

Stockton-on-Tees, Dur.—Garbutt, Archibald and Archibald, 23 Albert Road, Middlesbrough, have prepared plans for 44 houses at Whitton Road, Fairfield, for Premier Dwellings, Ltd., 157 Albert Road, Middlesbrough.

Tamworth, Staffs.—R.D.C. recommended to purchase land at Dosthill for housing purposes.

Ulverston, Lancs.—U.D.C. have approved the erection of two police houses inside the grounds of the county police station.

Ventnor, I. of W.—U.D.C. have approved in principle scheme for the conversion of six pre-war houses in Newport Road, Upper Ventnor, into single-bedroom flats for old persons.

Wallsend, Northumb.—C.C. to build eight police houses at Perth Gardens.

Walsall, Staffs.—Housing Committee plan the erection of eight-storey blocks of flats for the Butts Street redevelopment scheme and in Field Road, Bloxwich.

Wellingborough, Northants.—R.D.C. to erect, subject to Ministry approval, 30 houses for slum clearance purposes.

Weston-super-Mare, Som.—B.C. recommended to approve the erection of 408 houses during this year.

West Riding.—C.C. recommended to approve the erection of a caretaker's house at each of the following schools: South Kirkby Infants'; Aston No. 2 Primary; Sprotborough Cusworth Lane Infants'; Armthorpe Infants'; and Ripon Grammar. Estimated cost £2,250 each.

Whitley Bay, Northumb.—Wilson and Wilson, St. Andrews Buildings, Gallowgate, Newcastle upon Tyne, have prepared detailed plans for 68 houses to be built on the Monk-seaton building estate.

Woolwich.—L.C.C. approved the development of Rockmount Road site by the erection of 251 dwellings in four 11-storey point blocks of flats, two four-storey blocks of maisonnettes, four terraces of two-storey houses and a two-storey block of one-room flats. There will also be a shop, five play spaces, 46 garages, parking spaces for 56 cars and 73 tenants' stores. Estimated cost £732,650.

Workington, Cumb.—B.C. recommended to approve layout plans for the development of land at Pearl Road for the erection of eight dwelling for aged persons.

MISCELLANEOUS

West Riding.—C.C. recommended to approve expenditure of £2,300 for provision and erection of county boundary signs on trunk and class one roads.

PLAYING FIELDS, PARKS, ETC.

Bristol.—Planning and Public Works Committee have approved schemes for the grading and adaptation of land in the Malago Valley and clearing and regrading work at Trym Valley between Trowbridge Road and Shetland Road for use as open spaces. Estimated cost £750 and £1,400, respectively.

Cleckheaton, Yorks.—West Riding C.C. recommended to approve draining, levelling

and laying out land as playing fields for Cleckheaton Grammar and Secondary Schools. Estimated cost £21,375.

Durham.—R.D.C. to sell, subject to planning approval, land to New Durham and District Working Men's Club and Institute, for development as a permanent car park and sporting and recreational facilities.

Eccles, Lancs.—Borough Surveyor to be authorised to approve erection of 3ft. 6in. high bow top fencing at bank edge of footpath in Chestnut Road and formation of an amenity garden at junction of Chestnut Road and Walnut Road. Estimated cost £800.

Kirkcaldy, Fife.—B.C. have approved the construction of a golf course at Dunnikier.

Ormskirk, Lancs.—U.D.C. surveyor to prepare revised plan for park at Junction Lane, Burscough.

Portsmouth.—City Council recommended to approve the re-laying of one of the bowling greens at Milton Park. Estimated cost £800.

Southend, Essex.—B.C. are considering the provision of a racecourse at Leigh Marshes.

RIVER AND FLOOD PREVENTION WORKS

Belfast.—City Council have approved a scheme for repairs to the embankment between Victoria Park and Belfast Lough. Estimated cost £15,000.

Cambridge.—Great Ouse River Board have approved, subject to Ministry approval, schemes for embanking Mill Basin from St. John's Fen End to Lordbridge, and ancillary works, and drain works for connecting the gravity area north of Lordsbridge to the pumped system. Estimated cost £7,284 and £3,533, respectively.

St. Helens, Lancs.—B.C. to contribute £6,775 towards cost of a £50,000 scheme designed to prevent flooding in the Waterdale Crescent and Mill Lane areas of Sutton.

ROADS, BRIDGES AND SITE WORKS

Barnes, Surrey.—B.C. recommended to approve a plan for a flyover at the junction of Upper Richmond Road, Roehampton Lane, Queens Ride and Rocks Lane.

Bath, Som.—City Council have approved scheme for the resurfacing of Pulteney Street in red asphalt.

Batley, Yorks.—B.C. to apply for sanction to borrow £2,000 for re-laying of St. James Street, and £1,530 for construction of roads and sewers in the Birstall central area redevelopment scheme.

Borough Engineer to be instructed to prepare plans, etc., for making-up Musgrave Street and College Street, Birstall.

Bradford, Yorks.—City Council recommended to apply for sanction to borrow £9,520 for private street works in Kenmore Road, Kenmore Crescent, Kenmore Grove, Kenmore Walk and Kenmore Drive.

Caernarvon.—B.C. have approved scheme for the rebuilding of the Aber Bridge which links the town with the Aber foreshore. Estimated cost £60,000.

Gosport, Hants.—C.C. have approved schemes for Rowner Arch improvement and new road from Privett Road/Gomer Lane junction to Browndown Halt, Lee-on-Solent, for B.C. Estimated cost £40,000 and £24,000, respectively.

Heywood, Lancs.—Manchester City Council recommended to apply for sanction to borrow £550,000 for construction of roads and sewers and other works on the overspill development area at Heywood.

Isle of Ely.—C.C. recommended to approve the following road schemes: Work on High Street, March (£1,650); Peterborough Road, Whittlesey (£4,453); Norfolk Street, Wisbech (£3,395); Slade End, Chatteris (£4,408); road near Regent Garage, Witches Toll (£5,056); Littleport Bridge to Mile End road junction (£5,065); Crowland Road, Thorney (£2,928); Benwick Road, Whittlesey (£2,992); Victoria Road, Wisbech (£6,971); New Road, Chatteris (£4,355); Middle Broad Drove (£7,618); Stamp Fen Road (£4,119); Floods Ferry Road (£8,282); Ten Mile Bank (£2,901); Thurlands Drove, Upwell (£3,774); Money Bank, Wisbech (£9,014); Euxmoor Bridge (£2,400); Prickwillow Bridge (£7,200); and improvements to Minister Place, Ely (£2,000).

Lancashire.—C.C. recommended to approve, subject to M.T. approval, the lifting of the Cockerham Marsh Road. Estimated cost £100,000. Scheme provides for a 24ft. carriageway with a 6ft. grass verge on each side to bring those parts of the road now liable to flooding to 3ft. 4in. above the present level. Three sections of road are involved: From the tidal bar north of Lane End Farm to west of Mill House Bridge (1,890yd.); a section south of Sand Villa (80yd.); the road between France Hill and Cocker Bridge (160yd).

Londonderry.—C.C. propose the following works in the next financial year. Reconstruction of more than two miles of trunk road

from Coleraine to Limavady, at Balteagh, estimated cost £200,000; resurfacing of the main street—a trunk road—in Castledawson, £10,000; reconstruction of class I roads, £185,000; class II, £90,000; and class III, £75,600.

Richmond, Surrey.—B.C. propose to provide a car park in the Old Deer Park. Estimated cost £8,910.

Shrewsbury, Salop.—B.C. recommended to approve plans for the widening and making-up of Preston Street. Estimated cost £21,800.

Surrey.—C.C. have approved and submitted to the Ministry, detailed plans for flyovers to carry Kingston By-pass over two road junctions.

Wigan, Lancs.—Planning Committee have approved in principle development of Poolstock, Chapel Lane, Derby Terrace and Powell Street, as an inner ring road.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Ashton-in-Makerfield, Lancs.—U.D.C. have approved scheme for sewage disposal improvement. Estimated cost £10,385.

Bourne, Lincs.—U.D.C. have approved three stages of a five-stage sewerage scheme as follows: (1) Sewers in West Street, etc., cleansing of watercourse and culverts and laying of surface water sewers, £30,000; (2) sewage disposal works extensions, Harrington Street culvert, North Road area sewers, Harrington Street and Willoughby Road sewers, £60,000; (3) trunk outfall sewer, Eastgate and Abbey Road, £50,000.

Bradford, Yorks.—City Council recommended to approve extension of culvert at Odsal Tip. Estimated cost £5,000.

Calne and Chippenham, Wilts.—R.D.C. to submit to Ministry and C.C. for approval and grant aid sewerage and sewage disposal scheme for the Derry Hill area. Estimated cost £39,600.

Clutton, Som.—Ministry have approved R.D.C.'s sewerage scheme for Chew Magna and Stowey Sutton. Estimated cost £250,000.

Docking, Norfolk.—R.D.C. have submitted to C.C. for planning approval scheme for the construction of sewage disposal works at Great Bircham.

Goole, Yorks.—West Riding C.C. recommended to contribute a sum of £490 to the Reedness and Swinefleet Drainage Commissioners, towards the cost of reconstructing a culvert which carries the Quay Lane, Swinefleet (Unclassified) County Road over Black Drain at Swinefleet. Total cost of scheme £2,833.

Lowestoft, Suffolk.—B.C. recommended to approve the inclusion of the following schemes in the 1960-61 programme: South Lowestoft scheme, first stage, storm water scheme, Pakefield area, £12,000; Sands Lane pumping station, £6,600; new pumps, Hall Road pumping station, £1,600; enlarging sewer in Gorleston Road near station, £450; Princes Walk pumping station, etc., new pump and sewer extension, £3,700; Blackheath Road/Long Road sewerage, new connection across Kirkley stream, £1,200.

Masham, Yorks.—R.D.C. have approved scheme to connect 20 houses to the sewage disposal system.

Melford, Suffolk.—Ministry have authorised R.D.C. to proceed with sewerage scheme for Great Walsingham.

Newry, Down.—Ministry have intimated that it is prepared to grant £195,000 towards the U.D.C.'s £260,000 sewerage scheme. Munce and Kennedy, 133 University Street, Belfast, are the consultant engineers.

Ploughley, Oxon.—Ministry have approved R.D.C.'s sewerage schemes for the villages of Middleton Stoney, Souldern and Charlton-on-Otmoor.

Sowerby Bridge, Yorks.—U.D.C. to apply for sanction to borrow £13,740 for replacing sewer at Old Causeway, off Wharf Street.

Swaffham, Norfolk.—R.D.C. to submit to Ministry for approval sewerage scheme for Bradenham. Estimated cost £28,095.

Wellingborough, Northants.—R.D.C. to prepare scheme for additions to Earls Barton sewage disposal works.

West Lancashire.—R.D.C. recommended to appoint Ward, Ashcroft and Parkman, civil engineers, 38 The Temple, Liverpool, 3, to prepare plans for sewerage schemes in the following parishes: Scarisbrick, Rufford, Barton, Pinfold, Hurlston Green and Heaton's Bridge, Shirdley Hill, Robbins Bridge, Scotch Piper, Four Lane Ends, Great Altcar, and the surveyor to proceed with the preparation of schemes in respect of Barrow Nook, Moss Road, Segars Lane and New Cut Lane.

STREET LIGHTING

Bolton, Lancs.—Lighting Committee have approved scheme for converting gas lighting to electric in Seymour Road, etc. Estimated cost £6,020.

Dover, Kent.—B.C. recommended to approve scheme for improving street lighting from Aycliffe estate to South Lines Bridge. Estimated cost £1,160.

Lowestoft, Suffolk.—B.C. recommended to approve scheme for the provision of columns and lanterns for the South Pier illuminations. Estimated cost £1,500.

St. Helens, Lancs.—B.C. to spend £560 on improving lighting in parts of streets to be made-up in the Pocket Nook area. The streets affected are Vernon Street, Earl Street, Pitt Street, Bolton Street and Parlame Street.

B.C. instructed to prepare plans for the extension of street lighting improvements in the Pocket Nook area.

Walton and Weybridge, Surrey.—U.D.C. propose the conversion of gas street lamps to electricity. Estimated cost £12,000.

CONTRACTS

Full details of the Contracts marked * will be found in our Advertisement Columns.
BUILDING AND DECORATING
(See also Housing Schemes)

Aberdeenshire.—Construction of extensions and alterations at Craigwell Depot, Aboyne, for C.C. The work comprises the erection of a new smithy, engineering shop extension, road stores, and extensions to sewage treatment works. Documents from the Surveyor, 4 Albyn Place, Aberdeen. Tenders by Feb. 17.

Aberdeen.—Proposed sports pavilion at Kaimhill, for City Council. Applications, in writing, to the City Architect, 11 Broad Street, Aberdeen. Tenders by Feb. 11.

Aberdeen.—Construction of a boiler-house and the installation of low-pressure hot-water heating and domestic hot-water supply systems, as follows, at Rubislaw Occupational Centre, for City Council: (a) Heating work; (b) several works comprising—excavator, concrete, brick and roughcast; carpenter, joiner and ironmonger; plumber; lath and plaster; painter and glazier works. Applications, in writing, to the City Architect, 11 Broad Street, Aberdeen. Tenders by Feb. 11.

Aberdeen.—Execution of the plaster, cement and floor tile works at the following, for City Council: (a) Great Northern Road scheme, section one—36 houses; (b) Great Northern Road scheme, section two—26 houses. Applications, in writing, to the City Architect, 11 Broad Street, Aberdeen. Tenders by Feb. 11.

Alnwick, Northumb.—Provision of public conveniences under the following contracts, for R.D.C.: Contract 7/59—location of proposed convenience—new building at Embleton; 8/59—new building at Low Newton-by-the-Sea; 9/59—new building at Boulmer; 10/59—conversion of existing building at Craster. Documents from O. M. Farrell, surveyor, 34 Green Batt, Alnwick. Tenders by Feb. 8.

Atcham, Salop.—Exterior decoration of 171 houses at various sites, for R.D.C. Documents from the Council's Surveyor, 24 St. John's Hill, Shrewsbury. Tenders by Feb. 4.

Ballymoney, Antrim.—Minor improvements at Robinson Memorial Hospital to the matron's bungalow, for North Antrim Hospital Management Committee. Documents from W. and M. McGiven, architects, 1 Waterside, Coleraine. Tenders by Feb. 3.

Belfast.—Reroofing the existing lean-to roofs at Auxiliary Fire and Rescue Service Station at Feldon House, Mill Road, Whitehouse, for Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast, 1. Tenders by Feb. 3.

Belfast.—Erection and construction of a new secondary intermediate school (420 pupil-places) and all contingent works, for Irish Christian Brothers. Documents from W. H. McEvoy, quantity surveyor, 73 May Street, Belfast. Deposit £5 5s. Tenders by Feb. 19.

Berkhamsted, Herts.—Conversion into new council offices, of 275 High Street, for R.D.C.: (1) Structural alterations and additions, decorations and plumbing; (2) central heating by oil-fired boiler, and (3) complete electrical re-wiring and lighting installations. Contractors may tender for one or more of the items. Documents from C. Laidman, surveyor, 102 High Street, Northchurch, Berkhamsted. Tenders by Feb. 15.

Bredbury and Romiley, Ches.—External painting of Council houses, comprising the following, for U.D.C.: Group one—119 houses and 16 bungalows, Cherry Tree estate, Romiley; group two—120 houses, Cherry Tree estate, Romiley; group three—44 houses, Woodlands estate, Bredbury; group four—21 bungalows, Barrack Hill Close, Romiley. Documents from T. P. Hodgkinson, engineer and surveyor, Council Offices, George Lane,

Bredbury. Contractors may tender for one or more of the above groups, and the council reserve the right to divide the work among two or more contractors. Tenders by Feb. 6.

Burton-upon-Trent, Staffs.—Erection of a gymnasium and changing rooms, Anglesey Secondary Modern School, for B.C. Applications to Borough Architect, Town Hall, Burton-upon-Trent, by Feb. 7. Deposit £2 2s. Tenders by March 9.

Bushey, Herts.—Construction of brick public conveniences and ancillary works at North Bushey Children's Playground, Park Avenue, for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Rudolph Road, Bushey. Deposit £2 2s. Tenders by Feb. 5.

Cardiff.—Alterations and additions at the Cardiff High School for Boys, Newport Road, for City Council, comprising a single-storey block containing a new gymnasium, changing rooms, toilets, stores and boiler room, and alterations to the existing building to provide additional classrooms. Documents from the Architect's Department, 12 Park Place, Cardiff. Deposit £2 2s., cheques payable to Corporation. Tenders by Feb. 17.

Cardiff.—Construction of a public convenience and store at the Maindy Stadium, North Road, for City Council. Documents from City Architect's Department, 12 Park Place, Cardiff. Deposit £2 2s., cheques payable to Corporation. Tenders by Feb. 17.

Castlereagh, Down.—Erection of a store and site works at the rear of the Council Offices, for R.D.C. Documents from Council Offices, 368 Cragagh Road, Belfast, 6. Deposit £2 2s. Tenders by Feb. 11.

Corby, Northants.—Single-storey bowling green pavilion, incorporating public conveniences, on the Coronation Park, Cottingham Road, for U.D.C. Documents from G. B. Blackall, Council Offices, Corby. Deposit £2 2s., cheques payable to U.D.C. Tenders by Feb. 9.

Cork, Eire.—Erection and completion of the proposed new wing at St. Bonaventure's Capuchin Hostel, Wilton, for The Capuchin Order. Documents from J. R. Boyd Barrett, architect, 5 Camden Place, Cork. Deposit £10 10s. Plans also seen at the offices of Shaun McDermott Murphy, 50 South Mall, Cork. Tenders by Feb. 5.

Cork.—Structural alterations and incidental building work at Heatherside Hospital, for C.C. Documents from the Secretary, Cork County Council, Annabella, Mallow. Deposit £5. Tenders by Feb. 6.

Cornwall.—Erection of new farm buildings and improvements to existing farm buildings (stage two), at Coswinsawen Farm, for C.C. Documents from the County Land Agent, 2 Strangways Terrace, Truro. Deposit £3 3s. Tenders by Feb. 20.

Doncaster.—Erection of science room extension, Wheatley Secondary Modern Boys' School, contract 695, for B.C. Documents from Borough Architect, 15 South Parade, Doncaster. Deposit £3 3s. Tenders by Feb. 15.

Durham.—Following, for C.C.: Chopwell Modern School—provision of bathroom in schoolhouse; Durham Girls' Grammar School—provision of bathroom in schoolhouse; Durham Technical College—installation of stage lighting; Egglecliffe New Modern School—(a) electrical installation, (b) heating and d.h.w. installations, (c) hardwood block and strip floors, (d) suspended ceilings, (e) tarmacadam pavings, (f) playing fields, (g) pre-cast concrete beam floors, (h) vinyl tile paving, and (i) ironmongery; Hebburn Technical College—installation of stage lighting; Jarroft Croft Terrace County School—provision of bathroom in schoolhouse; Peterlee Dene House New Modern School—(a) electrical installation, (b) tarmacadam pavings, (c) playing fields, (d) sliding folding screen, (e) cloakroom fittings, (f) hardwood strip and block floors, (g) thermoplastic tile flooring; South Hetton Modern School—provision of bathroom in schoolhouse; Tursdale County School—provision of bathroom in schoolhouse; New Watling Street, Leadgate—erection of one pair semi-detached standard police houses and one detached office; Fairfield, Stockton-on-Tees—erection of two pairs semi-detached senior police officers' houses and four garages; The Green, Tunstall—electrical installation to one pair standard police houses and one pair with office. Applications to County Architect, South Street, Durham, by Feb. 3.

East Riding.—Adaptations to provide office accommodation at Bridlington Police Station, for C.C. Applications to the County Architect, County Hall, Beverley, by Feb. 12.

East Suffolk.—Site works, foundations, services, decorations, etc., in connection with a prefabricated timber four-class primary school at Bradwell V.C.P. School, for C.C. Applications to County Architect, County Hall, Ipswich, by Feb. 8. Tenders by March 11.

Essex.—Following, for C.C.: (1) Canvey Island branch library in traditional construction, estimated cost £19,000; (2) hostel for elderly persons, Highview, Chigwell—alterations and installation of lift. Lift will be supplied by a sub-contractor already nominated, estimated cost of whole contract £4,500; (3) Stambury County Primary School—connection to sewer—conversion of existing toilets to water-borne system, provision of sewage pump and ejection to sewer in road. Separate applications to H. Conolly, county architect, County Hall, Chelmsford, by Jan. 30.

Essex.—Erection of additional classrooms at Colchester Monkwick County Primary School, for C.C., comprising the construction of foundations, plumbing, drainage, finishings, external works, etc. The buildings will be of sectional wooden construction and will be supplied and erected by a sub-contractor, already nominated, within the contract. The value of the whole contract is £6,500. Applications to H. Conolly, county architect, County Hall, Chelmsford, by Jan. 30.

Grimby, Lincs.—Following works required in the erection and completion of the Grantham Avenue Two-Form Entry Primary Junior Mixed School, for B.C.: (a) General building contract, including foundations, boilerhouse and superstructure works to the main two-storey and subsidiary single-storey blocks, together with drainage, roads, paths, fencing and other ancillary works; (b) heating and hot water installations with oil-fired boiler plant; (c) electrical installations. Documents from J. V. Oldfield, engineer and architect, Municipal Offices, Town Hall Square, Grimby. Deposit £5 each contract. Tenders by Feb. 13.

Grimby, Lincs.—Following works required in the erection and completion of a new science block at the Havelock Secondary School, Holyoake Road, off Carr Lane, for B.C.: (a) General building contract, including foundations, boilerhouse and superstructure works to a single-storey classroom block, together with drainage, paths, and other ancillary works; (b) heating and hot water installations with oil-fired boiler plant; (c) electrical installations. Documents from J. V. Oldfield, engineer and architect, Municipal Offices, Town Hall Square, Grimby. Deposit £5 each contract. Tenders by Feb. 13.

Halifax, Yorks.—Separate tenders in the following trades in connection with extensions to girls' cloakroom, etc., Clare Hall County Secondary School, for B.C.: Mason, etc., carpenter and joiner, plumber and glazier, plaster. Documents from Borough Engineer, Crossley Street, Halifax. Tenders by Feb. 8.

Hambledon, Surrey.—Alterations to Ellens Green School House, Ellens Green, Ewhurst, for R.D.C. Documents from the office of the Engineer and Surveyor, Council Offices, Bury Fields, Guildford. Tenders by Feb. 8.

Hemel Hempstead, Herts.—Provision and erection of two 100ft. by 30ft. greenhouses, boiler house, chimney and the installation of hot water heating apparatus at the Council's central nursery site, Two Waters Road, for B.C. Documents from A. H. Turner, borough engineer, High Street, Hemel Hempstead. Tenders by Feb. 9.

Hereford.—Erection of changing accommodation at King George's playing fields, for City Council. Documents from the City Surveyor, Town Hall, Hereford. Deposit £2 2s. Tenders by Feb. 3.

Holland, Lincs.—Erection of secondary school at Old Leake, near Boston, for C.C. Applications to Architect, County Hall, Boston. Deposit £2 2s. cheque. Tenders by Feb. 22.

Hornsey, Middx.—External and internal decoration work at various schools, for B.C. Documents from Engineer and Surveyor, Town Hall, The Broadway, N.8. Tenders by Feb. 22.

Huddersfield, Yorks.—Construction of the following sewage works extensions at Station Road, contract 21, for B.C.: (1) Two-storey stores and workshops building, approx. 140ft. long, 30ft. wide and 33ft. high, with steel frame and brick and concrete construction; (2) two-storey canteen and welfare building approx. 82ft. long, 39ft. wide and 30ft. high, with reinforced pre-cast concrete frame and brick and concrete construction; (3) renovation and conversion of an existing two-storey building, approx. 80ft. long, 55ft. wide and 30ft. high; (4) miscellaneous works, road works, drainage. Documents from A. L. Percy, engineer and surveyor, High Street Buildings, Huddersfield. Deposit £10. Plans also seen at the offices of the Sewage Works Extension Engineer, Station Road, Bradley, Huddersfield.

Huddersfield.—Construction of offices, changing rooms, potting shed, paddling pool, paths, etc., at the Fernside Park, Almondbury, for B.C. Documents from the Architect, High Street Buildings, Huddersfield. Deposit £1 1s. Tenders by Feb. 16.

Iffracombe, Devon.—Supply and fixing of approximately 700 chairs in the Alexandra

Theatre, for U.D.C. Documents from K. R. Bartlett, engineer and surveyor, Council Offices, Ilfracombe.

Kesteven.—Extensions for temporary secondary use at Huntingtower Road Primary School, Grantham, for C.C. Applications to County Architect, County Offices, Sleaford, Lincs., by Feb. 3. Tenders by Feb. 22.

Kirkcaldy, Fife.—Alterations and additions to Sauchenbush Community Centre, for B.C. Documents from the Burgh Engineer, Town House, Kirkcaldy. Tenders by Feb. 8.

Lancashire.—Erection of three separate single-storey brick-built toilet blocks, with concrete floor and foundations, felt covered flat timber roofs and drainage and services at Lancaster Skerton County Secondary School, for C.C. Applications to County Architect, P.O. Box 26, County Hall, Preston, by Feb. 1.

Lancashire.—Supply and fixing library fittings, laboratory benches, classroom fittings, etc., at Lancaster and Morecambe College of Further Education, phase III, for C.C. Applications to County Architect, P.O. Box 26 County Hall, Preston, by Feb. 1.

Lanarkshire.—Painter work at Blackwood J.S. School, for C.C. Applications, in writing, to D. G. Bannerman, county architect, 34 Albert Street, Motherwell, by Jan. 30.

Lanarkshire.—Painter work at Cairns R.C. Primary School, Cambuslang, for C.C. Applications, in writing, to D. G. Bannerman, county architect, 34 Albert Street, Motherwell, by Jan. 30.

Londonderry.—Erection of a church hall at Strand Road, for the Committee of Strand Presbyterian Church. Documents from the Architect, 4 Castle Street, Londonderry. Deposit £5 5s. Plans also seen at the offices of Thomas Earl, surveyor, 1a New Row, Coleraine. Tenders by Feb. 22.

Loos, Corn.—Following, for U.D.C.: (a) re-roofing of the Guildhall, Fore Street, East Loos; roof area approx. 35 squares. Tenders are also invited for the; (b) laying and jointing of approx 370yd. of 6in. dia. glazed stoneware sewer pipes with the construction of three brick manholes and all incidental work. Documents from the Surveyor's Office, The Guildhall, Fore Street, East Loos.

Luton, Beds.—Supply and erection of one prefabricated timber classroom hut at each of Farley and Norton Road C.P. Junior Schools, for B.C. Documents from Architect, Town Hall, Luton. Tenders by Feb. 8.

Mablethorpe and Sutton, Lincs.—Construction of 12 timber bathing chalets on the beach at Mablethorpe, for U.D.C. Documents from the Council Offices, Mablethorpe. Deposit £2 2s. Tenders by Feb. 13.

Mablethorpe and Sutton, Lincs.—Construction of foreshore administration block with public lavatories and eight shops with intermediate public shelters on the central promenade at Mablethorpe, for U.D.C. Documents from the Council Office, Mablethorpe. Deposit £3 3s. Tenders by Feb. 13.

Manchester.—Erection of following, for City Council: (a) Combined clinic at Plant Hill Road, Blackley; (b) combined clinic at Charlestown Road, Blackley; (c) day nursery at Daisy Bank Road, Victoria Park. Documents from City Architect, P.O. Box 488, Town Hall, Manchester. Tenders by Feb. 10.

Manchester.—Forming a flat roof and parapet walls at New Islington public hall, Ancoats, for City Council. Documents City Architect, P.O. Box 488, Town Hall, Manchester. Tenders by Feb. 3.

Middlewich, Ches.—Internal decoration of four rooms at the Town Hall, for U.D.C. Documents from D. A. Stubbs, surveyor, Victoria Building, Middlewich. Tenders by Feb. 6.

Newbury, Berks.—External repainting of 224 Council houses and 46 garages, on 10 sites, for R.D.C. Documents from the Surveyor, Phoenix House, 50 Bartholomew Street, Newbury. Tenders by Feb. 16.

Newcastle-under-Lyme, Staffs.—Erection of Roe Lane C.S.M. School, for B.C., comprising an assembly hall, small hall, kitchen, changing rooms, library, 11 classrooms, science laboratory, housecraft room and staff accommodation, having a total floor area of approx. 28,000 sq. ft. and contained on three floors. The construction comprises a reinforced concrete frame, floors and roof, to be erected by a nominated sub-contractor on reinforced concrete foundation rafts prepared by the General Contractor and clad with brick or reconstructed stone infill panels and with timber windows having metal opening lights. Applications to the Borough Surveyor, Lancaster Building, High Street, Newcastle, by Feb. 1. Deposit £2 in notes.

Newcastle upon Tyne.—Construction of public conveniences at Walker Park and Nuns Moor Park, for City Council. Documents from the City Engineer, Town Hall, Newcastle upon Tyne. Tenders by Feb. 8.

Newcastle upon Tyne.—Construction of a new bowls pavilion incorporating Public Conveniences in Hodgkin Park, for City Council.

Documents from the City Engineer, Town Hall, Newcastle upon Tyne. Tenders by Feb. 8.

Newhaven, Sussex.—Erection of nine brick bus shelters on various sites, for U.D.C. Documents from A. E. Motyer, engineer and surveyor, Council Offices, Fort Road, Newhaven. Tenders by Feb. 9.

Newmarket, Suffolk.—Erection of six lock-up garages to be built in traditional construction at a site off Exning Road, for U.D.C. The work to be carried out includes the whole of the site preparation and drainage. Documents from P. D. Lees, architect, Council Offices, Severs House, Newmarket. Deposit £2 2s. Tenders by Feb. 9.

Newtown and Llanilwchaern, Monts.—Construction of 12 timber-framed and boarded lock-up shops in Newtown market hall, for U.D.C. Documents from the Council's Surveyor, Town Hall, Newtown. Tenders by Feb. 20.

North Armagh.—Reconstruction of seven ward kitchens together with ancillary works at the Lurgan and Portadown Hospital, for Hospital Management Committee. Documents from Thos. T. Houston, architects, 26 College Gardens, Belfast. Deposit £3 3s. Tenders by Feb. 16.

Northern Ireland.—Plumbing installation in 343 dwellings and one shop at Rathcoole nine and ten (section 2), for Housing Trust. Documents from the Trust, 12 Hope Street, Belfast, 12. Tenders by Feb. 5.

North Riding.—Conversion of out-offices at Gillamoor (C.E.) School, near Kirkby Moorside, for E.C. Documents from F. Barraclough, County Hall, Northallerton. Tenders by Feb. 19.

Oxfordshire.—Minor extensions comprising three additional rooms in traditional construction, at Park End Street Offices, for C.C. Applications to the County Architect, Park End Street Offices, Oxford by Feb. 1.

Peterborough.—Erection of 37 brick garages on the Gunthorpe estate and nine on the Paston Ridings estate, for City Council. Documents from City Engineer, Town Hall. Deposit £2. Tenders by Feb. 15.

Portsmouth, Hants.—Erection of a new teaching block and boiler house and the conversion of Foster Hall at the Portsmouth Training College, for City Council. Applications to Gollins, Melvin, Ward and Partners, 15 Manchester Square, London, W.1, by Feb. 8. Deposit £1. Tenders by March 17.

Rochdale, Lanes.—External painting of 816 dwellings and 22 shops on various estates, for B.C. Documents from Borough Surveyor, Town Hall, Rochdale. Tenders by Feb. 8.

Rushden, Northants.—Work at Rushden cemetery, for U.D.C., comprising building a wall in ashlar masonry about 20ft. long 3ft. high, 9in. thick, with plinth and coping and Portland stone inset panels. Documents from the Engineer and Surveyor, Council Offices, Rushden. Tenders by Feb. 6.

St. Albans, Herts.—Improvements and repairs to 58 houses, Lybury Lane, Redbourn, for R.D.C., including the provision of bathrooms, hot water supply, indoor sanitation, kitchen improvements, etc. Applications to Eric N. Wheeler, Council Offices, 43 Upper Lattimore Road, St. Albans, by Feb. 5.

Southampton.—Erection of single-storey occupation centre in the (former) Sydney House grounds at Peartree Avenue, Bitterne, for B.C. Applications in writing to Borough Architect, Civic Centre, Southampton, by Jan. 30. Tenders by Feb. 22.

Staffordshire.—Construction of brick and concrete boundary and retaining walls at the improvement between Bury Bank House and Darlston on the Sandon-Stone-Woore Road, A.51, for C.C. Documents from the County Surveyor, County Buildings, Stafford. Tenders by Feb. 4.

Sunderland.—Extensions to Southmoor Technical School, for B.C. Documents from Borough Architect, Grange House, Stockton Road, Sunderland. Deposit £2 2s., cheques payable to Corporation. Tenders by Feb. 12.

Swanscombe, Kent.—Modernising approx. 196 council houses by installation of lavatory basins and sinks together with incidental plumbing and drainage, for U.D.C. Applications to the Surveyor, Council Offices, Swanscombe, by Feb. 15.

Taunton, Som.—Alterations, repairs and re-decoration at 76 Wood Street, and 32 Queen Street, for B.C. Documents from H. G. Cox, housing maintenance superintendent, Lambrook Farm Depot, Priory Avenue, Taunton. Tenders by Feb. 2.

Torquay, Devon.—Following works, for B.C.: (1) Babbacombe Concert Hall—alterations and additions to present dressing rooms; (2) Torquay Coach Station—two booking offices; (3) six garages—Combe Pafford estate. Drawings and conditions of tender may be inspected at the Borough Surveyor's Office. Written application to the Borough Surveyor, Town Hall, Torquay, by Feb. 3. Deposit £2 2s. each, payable to the Corporation.

West Lothian.—Paintwork at Blackburn R.C. Primary School, stage II, for C.C. Applications to the County Architect, County Buildings, Linlithgow, by Feb. 1.

West Riding.—Pulling down of a two-bay cartshed and the construction of a three-bay implement shed (concrete, timber and asbestos-cement) at Oakroyd Farm, Lower Dunsforth, near Boroughbridge, for C.C. Documents from the County Land Agent, County Hall, Wakefield. Tenders by Feb. 8.

West Riding.—Repairs to the stone retaining wall at the Walsden C.E. School, for C.C. Documents from E. Aitken-Davies, divisional education officer, Education Office, Todmorden. Tenders by Feb. 5.

West Riding.—Adaptation works at Barnoldswick Child Welfare Centre, for C.C. Applications to the Divisional Architect, Salisbury Buildings, Albert Street, Harrogate, by Feb. 1. Tenders by Feb. 22.

West Riding.—An additional classroom, cloaks and entrance lobby at Rossington Grange Lane Infants' School, for C.C. Documents from the Divisional Architect, Planet Road, Adwick-le-Street, near Doncaster, by Feb. 8. Tenders by Feb. 22.

West Riding.—Floor repairs at the Maltby Craggs Primary and the Dinnington Secondary Schools, for C.C. Documents from A. E. Hall, 38 Moorgate Road, Rotherham. Tenders by Feb. 8.

***West Riding.**—Alterations to County Police Station, for C.C. Apply by Feb. 12. Tenders by March 4.

Wokingham, Berks.—Construction of 12 garages at Watmore Lane Depot, Winnersh, for R.D.C. Documents from the Chief Engineer, Council Offices, Shute End, Wokingham. Tenders by Feb. 8.

***Worcester.**—Provision of additional sanitary accommodation at Hillborough Home for the Aged, Tallow Hill, for City Council. Deposit £3 3s. Tenders by Feb. 29.

CLOTHING AND TEXTILES

Barrow-in-Furness, Lanes.—Supply of uniform suits and overcoats during the year ending March 31, 1961, for B.C. Documents from the Borough Treasurer, Town Hall, Barrow-in-Furness. Tenders by Feb. 8.

***Bath, Som.**—Supply of uniform clothing, for the Fire Brigade and Ambulance Service. Tenders by Feb. 20.

Bristol.—Supply of police clothing for 1960, for City Council. Documents from Police Headquarters, Bridewell Street, Bristol, 1. Tenders by Feb. 18.

Cheshire.—Supply of following, for C.C.: Firemen's uniforms, caps, footwear, leggings, overalls, shirts and ties, raincoats, pullovers, socks and belts. Documents from the Chief Fire Officer, Cheshire County Fire Brigade, Walmoor House, Dee Banks, Chester. Tenders by Feb. 8.

Croydon, Surrey.—Supply of uniform clothing, footwear, etc., for men and women, for B.C. Documents from the Chief Officer, Central Fire Station, Croydon. Tenders by Feb. 29.

Great Yarmouth.—Supply of police clothing for the regular force for the year 1960-61, for County Borough Police. Particulars of the articles required are: Overcoats, mackintoshes, serge jackets and trousers, skirts, caps, shirts, collars, ties and gloves. Documents from the Chief Constable, Police Headquarters, 26-27 South Quay, Great Yarmouth. Tenders by Feb. 22.

Lancashire.—Supply of overalls and protective clothing, for C.C. Documents from the County Medical Officer of Health, Room 109, East Cliff County Offices, Preston. Tenders by Feb. 13.

Llanelli, Carm.—Following, for B.C.: Two hundred and fifty men's bib and brace overall trousers in good quality navy drill; 250 men's bib and brace overall jackets in good quality navy drill; 100 men's overall boiler suits in good quality navy drill. Documents from the Borough Surveyor, Town Hall, Llanelli. Tenders by Feb. 6.

Paisley, Renfrews.—Following, for B.C.: Jackets and trousers, greatcoats, caps, gloves, shirts, collars, ties, cloth capes, waterproof coats (gaberdine), waterproof leggings, fleece linings. Documents from the Chief Constable, Police Headquarters, Gilmour Street, Paisley. Tenders by Feb. 13.

Salford, Lanes.—Supply, between April 1960, and March, 1961, of fire service uniform clothing, caps, shoes, socks, shirts and pullovers, for City Council. Documents from the Chief Fire Officer, Central Fire Station, Crescent, Salford, 5. Tenders by Feb. 3.

DEMOLITION

Beverley, Yorks.—Demolition of 23 houses in Lairgate and Keldgate, for B.C. Documents from the Borough Engineer and Sur-

veyor, Municipal Offices, Beverley. Tenders by Feb. 8.

Brighouse, Yorks.—Demolition of 5-11 Briggate, for B.C. Documents from the Engineer and Surveyor, Commercial Street, Brighouse. Tenders by Feb. 19.

East Dereham, Norfolk.—Demolition of buildings and clearance of site at Baxter Row, for U.D.C. Documents from the Housing Officer, East Dereham U.D.C., Assembly Rooms, Dereham. Tenders by Feb. 9.

Huddersfield, Yorks.—Demolition of properties in Northgate, Northumberland Street, Union Street and York Street, the packing of certain cellars and areas, and clearance of site, etc., for B.C. Documents from the Borough Engineer, High Street Buildings, Huddersfield. Tenders by Feb. 8.

Rye, Sussex.—Demolition of ex-Naval huts, Camber Fields, and the clearance of the site, for B.C. Documents from the Borough Surveyor, Council Offices, Ferry Road, Rye. Tenders by Feb. 5.

Salford, Lancs.—Ellor Street clearance area 3, for City Council. Tenders by Feb. 3.

Skipton, Yorks.—Demolition of two houses, warehouse and offices, Newmarket Street, for U.D.C. Documents from Engineer and Surveyor, Town Hall, Skipton. Deposit £2 2s. Tenders by Feb. 8.

Wanstead and Woodford, Essex.—Demolition of buildings 1-15 Tilney Road, 48-90 Eastern Avenue, The Hall, and 2-16 Hall Road, E.11, for B.C. Documents from the Borough Engineer, Municipal Offices, Woodford, E.18. Deposit £2. Tenders by Feb. 17.

ELECTRICAL

Belfast.—Additions and modifications to existing electrical installations in Model Secondary School for Boys, Ballysillan Road, for City Council. Documents from Education Architect, 40 Academy Street, Belfast, 1. Tenders by Feb. 4.

Hastings, Sussex.—Electrical work at 90 houses at Barley Lane and All Saints Crescent, for B.C. Documents from the Housing Manager, 47 Wellington Square, Hastings.

Torquay, Devon.—Electrical installation to 16 bungalows, for B.C. Written application to the Borough Surveyor, Town Hall, Torquay, by Feb. 3. Deposit £2 2s., payable to the Corporation.

FENCING

Birmingham.—Supply and delivery of approximately 120,000yd. of 3ft. cleft chestnut fencing, 12,000yd. of 3ft. 6in. cleft chestnut fencing and 60,000 4ft. 6in. posts, to be supplied during the 12 months commencing April 1, 1960, for City Council. Documents from I. P. Macey, housing manager, Bush House, Broad Street, Birmingham, 1. Tenders by Feb. 16.

Liverpool.—Fencing at Speke playing fields, for City Council. Tenders by Feb. 4.

Maidstone, Kent.—Fencing of Mote Park, for B.C. Tenders by Feb. 8.

GAS AND WATER SUPPLY

Angus.—Following, for C.C.: Loch Lee scheme, first phase, contract 4/2. Construction of a reinforced concrete service tank of 150,000 gallons capacity together with the execution of relative works, at Lundie, for C.C. Documents from Crouch and Hogg, 18 Woodside Crescent, Glasgow, C.3. Deposit £5.

Ashton-under-Lyne, Lancs.—Construction of the Dove Stone reservoir and sundry pipelines connected therewith, for Ashton-under-Lyne, Stalybridge and Dukinfield (District) Waterworks Joint Committee. The impounding reservoir will be formed by an earthwork embankment about 1.865ft. in length and 124ft. in depth at the maximum point, together with the usual ancillary works such as tunnels, overflow, etc. Applications, with some details of work of this nature already carried out to the Secretary of the Committee, Waterworks Offices, Town Hall Chambers, Ashton-under-Lyne, by Feb. 9.

Cheadle, Staffs.—Cheddleton water scheme, proposed 3in. diameter water main extension to Forsbrook, contract 307, for R.D.C. Laying of approximately 1,600 lin. yd. of 3in. diameter cast-iron water main, together with ancillary works. Documents from the Surveyor, Council Offices, Leek Road, Cheadle. Deposit £5. Tenders by Feb. 5.

Eppingham, Norfolk.—Supplying and laying about 10 miles of 4in. bore cast-iron water main and incidental works in the eastern area, for R.D.C. Documents from J. C. Melliss and Co., engineers, 110 Horseferry Road, Westminster, S.W.1. Deposit £2 2s. Tenders by Feb. 15.

Goole, Yorks.—Excavating, providing and laying of 1,695 lin. yd. of 2in. asbestos-cement water mains, and 135 lin. yd. of lin. g.w.i. tube, valves, etc., in connection with the mains extension at East Cowick, for R.D.C.

Documents from consulting engineers, Fairbank and Son, The Gables, 62a Bootham, York. Deposit £2 2s., cheque payable to R.D.C. Tenders by Feb. 9.

Ledbury, Herts.—Construction of water main, contract 1, for U.D.C. Deposit £5 5s. Tenders by Feb. 19.

North Devon.—Construction of a water tower, for Water Board. Deposit £5 5s., cheque payable to Water Board. Tenders by Feb. 29.

North Devon.—Construction of a reinforced concrete covered service reservoir, with earthen embankments to contain 500,000 gallons and other ancillary works in connection therewith, at Bickham Moor, contract 55, for Water Board. Documents from Rofe and Raffety, engineers, 9 Brewer's Green, Buckingham Gate, Westminster, S.W.1. Deposit £2 2s. cheque. Plans also seen at the office of the Chief Engineer (North), North Devon Water Board, Grenville House, Bouthport Street, Barnstaple. Tenders by Feb. 13.

North Wales.—Regional water scheme, raw water, trunk and branch mains, reference No. C19/2, contract 2, for Llyn Conwy Water Board. Laying of about 7 miles of 12in. and 10in. miles of 9in. asbestos-cement pipes mainly with steel tubes across valleys, complete with all fittings, and the construction of chambers and other small ancillary works. Documents from Howard Humphreys and Sons, consulting engineers, Victoria Station House, Victoria Street, Westminster, S.W.1, by Feb. 5. Deposit £5 5s. Tenders by Feb. 29.

Oldham, Lancs.—Laying, etc., of approximately 4,000yd. of 12in. diameter spun-iron and steel pipes, together with ancillary work between Butterworth Hall pumping station and Piethorne reservoir, Milnrow, for B.C. Documents from Charles Busfield, engineer and general manager, Waterworks Office, 2 Wallshaw Place, Oldham. Deposit £3 3s. Tenders by Feb. 8.

Ross and Cromarty.—Black Isle Water, contract 12, for C.C. Laying and jointing of approximately 35 miles of 8in. to 2in. diameter asbestos-cement pipes, together with the construction of six service reservoirs, of mass concrete, with a combined capacity of 121,000 gallons, and all relative works in the Cromarty-Rosemarkie area. Documents from the County Water Engineer, Burn Place, Dingwall. Contractors wishing to inspect the site should meet at the Station Hotel, Avoch, at 10 a.m., on Feb. 2. Tenders by Feb. 16.

Sheffield.—Installation of low lift pumps, for Corporation Waterworks.

Sligo, Eire.—Laying of 1,124 lin. yd. 4in. water main at Cleveragh Road and Tonahubble, for B.C. Documents from the Borough Engineer, Town Hall, Sligo. Deposit £5 5s. Tenders by Feb. 5.

Yorkshire.—Water softening plant, for Claro Water Board. Tenders by Feb. 29.

HARBOURS, PIERS AND SEA DEFENCE WORKS

Weston-super-Mare, Som.—Repointing works to the sea wall between Anchor Head and the Old Pier, for B.C. Applications to the Borough Engineer, Town Hall, Weston-super-Mare. Tenders by Feb. 2.

HEATING AND VENTILATING

East Riding.—Installation of heating and hot water supply services in connection with the provision of additional workshop accommodation at South Hunsley County Secondary School, for C.C. Documents from Architect, County Hall, Beverley. Tenders by Feb. 9.

East Sussex.—Installation of oil-fired boiler plant at (a) Pelham House, Lewes, and (b) County Surveyor's Offices, Lewes, for C.C. Applications to the County Architect, County Hall, Lewes, by Feb. 5.

Haslemere, Surrey.—Supply of 19 Aidas lagged combination cylinders, type LCC, each capable of holding 20 gallons of hot water complete with high pressure ball valve, for U.D.C. The cylinders are to be supplied with the "Flow-and-Return" bosses blanked off with the Aidas approved fittings. Also to supply 19 3-kW Aidas Spirid immersion heaters, fitted with Aidas "Aidastat" thermostat 20-A rating, 8 1/2in. long. Documents from the Housing Manager, Half Moon House, Haslemere. Tenders by Feb. 4.

Haslemere, Surrey.—Installation of hot water systems and fittings in 20 Council houses at Marley Hanger, for U.D.C. The work comprises the installation of combination cylinders with immersion heaters, wash-hand basins and all necessary plumbing and wiring. Documents from the Housing Manager, Half Moon House, Haslemere. Tenders by Feb. 4.

Liverpool.—Supply and fixing of two heating boilers and one domestic boiler, Stockton Wood Road County Primary School, for City Council. Documents from City Engineer and Surveyor, Municipal Buildings, Liverpool, 2. Tenders by Feb. 4.

Sunderland.—Heating, hot and cold water and gas installation to extensions, Southmoor Technical School, for B.C. Documents from the Borough Architect, Grange House, Stockton Road, Sunderland. Tenders by Feb. 12.

HOUSING SCHEMES

Aberdeen.—Ninety houses at Balnagask scheme section 1, for City Council. Applications in writing to the City Architect, 11 Broad Street, Aberdeen. Tenders by Feb. 9.

Armagh.—Erection and completion of manager's house and roads and water and electrical services to pens at Poultry Testing Station, Gosford Castle estate, Markethill, for Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast. Deposit £2. Plans also seen at the offices of the Ministry of Labour and National Insurance, Local Office, The Mall, Armagh. Tenders by Feb. 3.

Becles, Suffolk.—Fifteen houses and 18 garages at Queen Elizabeth Drive, for B.C. Applications to Meen and Collis, architects, Station Road, Becles, by Jan. 31. Deposit £2 2s., cheques payable to Corporation.

Bedford.—Erection of (a) 53 houses and (b) 55 houses at Brickhill estate, for B.C. The period for tendering will be a minimum of two weeks in each case. Documents from F. W. Dawkes, borough engineer, Newnham House, Horne Lane, Bedford. Deposit £3 3s. Tenders by Feb. 5.

Belfast.—Ten type HA terrace houses at Arizona Street, for City Council. Documents from the Housing Architect, 97 Townsend Street, Belfast. Deposit £5 5s. Tenders by Feb. 9.

Birkenhead, Ches.—Forty-six dwellings, 14 shops and 11 lock-up garages at Prenton Dell estate, contract 11, for B.C. Documents from Borough Architect, 3 Conway Street, Birkenhead. Deposit £2 2s. Tenders by Feb. 16.

Clitheroe, Lancs.—Fifty-six dwellings at Manor Road housing site, for B.C. Deposit £2. Tenders by Feb. 25.

Glamorgan.—Following for Quarter Sessions and C.C.: (i) Coychurch, two pairs of police houses (one pair with office attached); (ii) Gwernifor estate, Mountain Ash, one pair police houses with office attached. Documents from the County Police Architect's Department, Bridgend. Deposit £2 2s. Tenders by Feb. 8.

Gravesend, Kent.—Fifty-six flats on a site at the junction of Queen Street and The Terrace, for B.C. Applications to F. W. Harrison, town clerk, Municipal Offices, Woodville Terrace, Gravesend. Tenders by Feb. 8.

Greenwich.—Maisonnettes and flats A and B, for B.C. Tenders by Feb. 2.

Isle of Man.—Two old people's bungalows at Laxey, for Local Government Board. Documents from the Architect and Planning Officer, Murray House, Douglas. Deposit £2 2s. payable to Government Treasurer. Tenders by Feb. 18.

Luton, Beds.—Erection of two two-storey blocks of 10 one-bedroom old people's dwellings, at Farley Hill, for B.C. Documents from Borough Architect, Town Hall, Luton. Tenders by Feb. 19.

Newcastle-under-Lyme, Staffs.—Nine aged person's bungalows at Westfield Avenue, Werton estate, Audley, for R.D.C. Documents from F. W. Ramm, clerk, Council Offices, Sidmouth Avenue, The Brampton, Newcastle-under-Lyme. Deposit £2 2s. Tenders by Feb. 4.

Norfolk.—Pair of semi-detached houses for caretakers at the County Technical College, King's Lynn, for E.C. Applications to F. Lincoln Ralphs, chief education officer, County Education Offices, Stracey Road, Norwich, by Feb. 3.

Reigate, Surrey.—Two blocks of maisonnettes at the Dome estate, for B.C. Deposit £2 2s. Tenders by Feb. 18.

Rochester, Kent.—Twenty-six three-bedroom houses and 12 flats at Warren Wood redevelopment (stage IV), for City Council. Deposit £3 3s. Tenders by March 7.

Ross and Cromarty.—Separate trades for the following, for C.C.: (1) Two two-apartment, four three-apartment, and two five-apartment houses at Kyle of Lochalsh (eight houses); (2) 11 three-apartment, and six four-apartment houses at Maryburgh (17 houses). The trades involved in all the contracts are: (a) Site preparation; (b) brick, etc.; (c) carpenter and joiner; (d) slater and roughcast; (e) plumber; (f) plaster; (g) electrical; (h) painter and glazier. Applications to R. Armour and Partners, quantity surveyors, 375 Union Street, Aberdeen, by Jan. 30.

Southwell, Notts.—Eleven pairs of houses at Abbott Crescent, Farnfield, together with appurtenant site works, for R.D.C. Documents from M. England, architect and surveyor, 7 Westgate, Southwell. Deposit £2 2s., cheques payable to R.D.C. Tenders by Feb. 22.

Surbiton, Surrey.—Twenty-nine traditional houses at Middleton estate, phase III, for

B.C. Applications to John H. A. Crundell, town clerk, Council Offices, Surbiton, by Feb. 4.

Swale, Kent.—Erection of one block of four old people's bungalows at Faversham-Lenham Road, Doddington, together with external works and other ancillary site works, for R.D.C. Documents from the Engineer and Surveyor at Whitehall, 48-50 Bell Road, Sittingbourne. Deposit £3 3s. Tenders by Feb. 8.

Swindon, Wilts.—Twenty-one old people's dwellings at Walcott, for B.C. Applications to the Borough Architect, Civic Offices, Swindon, by Feb. 19.

West Bromwich, Staffs.—Sixty-six old people's flats in three blocks, each two-stories high on sites at Yew Tree, Stone Cross and Hateley Heath, contract 112, for B.C. Applications to W. H. Greenwood, borough engineer and surveyor, Town Hall, West Bromwich, by Feb. 5. Tenders by Feb. 29.

Worcester.—Erection of caretaker's house at Gorse Hill Primary School, for City Council. Documents from City Engineer and Surveyor, 22 Bridge Street, Worcester. Deposit £3 3s., cheques payable to Corporation. Tenders by Feb. 11.

MATERIALS AND SUPPLIES

***Aberdare, Glam.**—Supply of 2,000 round dustbins, for U.D.C. Documents from the Engineer and Surveyor, Vestry Hall, Aberdare. Tenders by Feb. 5.

***Acton, Middx.**—Supply of materials, for B.C. Tenders by Feb. 12.

Altrincham, Ches.—Supply of the following for the year ending March 31, 1961, for B.C.: Plumbers' goods, grates, ironmongery, etc. Documents from the Borough Surveyor, Town Hall, Altrincham. Tenders by Feb. 5.

Antrim.—Supply and delivery throughout the county of implements, tools, pipes, cement, sundries, etc., for the year ending March 31, 1961. Documents from the Surveyor, County Courthouse, Crumlin Road, Belfast. Tenders by Feb. 5.

Ashton-in-Makerfield, Lancs.—Following for the year ending March, 1961, for U.D.C.: Granite chippings; broken stone; bituminous macadam; fine cold asphalt; tarspraying, concrete kerbs and flags; iron castings; salt-glazed pipes; mild steel dustbins; paint; motor fuels and oils. Documents from the Surveyor, Town Hall, Ashton-in-Makerfield. Tenders by Feb. 13.

***Ashton-under-Lyne, Lancs.**—Supply of materials, for B.C. Tenders by Feb. 10.

Ashton-under-Lyne, Lancs.—Following for the 12 months commencing April 1, 1960: Gritstone kerbs; precast concrete kerbs and flags; fine cold asphalt; bitumen macadam; building sand and concrete aggregates; salt-glazed ware pipes and gullies; castings; aluminium street nameplates; electric lamps. Documents from Borough Surveyor, Municipal Offices, Ashton-under-Lyne. Tenders by Feb. 16.

Atherton, Lancs.—Following for the year ending March 31, 1961, for U.D.C.: (1) Concrete flags; (2) concrete kerbs; (3) broken stone and sand; (4) granite and limestone chippings; (5) scavenging brushes; (6) iron castings (manhole covers and street gullies); (7) surface dressing; (8) Portland cement; (9) bituminous macadam and cold asphalt. Documents from Surveyor, Town Hall, Atherton, Manchester. Tenders by Feb. 13.

***Barnet, Herts.**—Supply of materials, for U.D.C. Tenders by Feb. 11.

***Barnsley, Yorks.**—Supply of materials, for B.C. Tenders by Feb. 16.

***Beeston and Stapleford, Notts.**—Supply of materials, for U.D.C. Deposit £2 2s.

Birkenhead, Ches.—Supply of the following for the 12 months commencing April 1, 1960, for B.C.: (a) Sulphate of alumina delivered to Ashgrove Waterworks, Wrexham Road, Chester; (b) sulphate of alumina delivered to Alwen reservoir, Cerrig-y-Druidion, near Corwen, North Wales; (c) precipitated chalk delivered to Alwen reservoir, Cerrig-y-Druidion, near Corwen, North Wales; (d) hydrated lime, delivered to Alwen reservoir, Cerrig-y-Druidion, near Corwen, North Wales. Documents from Water Engineer, 601 Borough Road, Birkenhead. Tenders by Feb. 15.

Birkenhead, Ches.—Supply of petrol, derv, gas and Marine diesel oils and boiler fuel oil for the 12 months commencing April 1, 1960, for B.C. Documents from the Town Clerk, Town Hall, Birkenhead. Tenders by Feb. 4.

Blackpool.—Following for the period April 1, 1960, to March 31, 1961, for B.C.: (1) Coke; (2) liquid disinfectants and cleansers; (3) toilet rolls; (4) soaps and soap powders; (5) chamois leathers, mops, etc.; (6) cleaning cloths, waste, and rags. Documents from the Borough Treasurer, Central Tendering Branch, P.O. Box 4, Municipal Buildings, Blackpool. Tenders by Feb. 9.

Bridgwater, Som.—Supply and delivery of approximately 12,000 gallons of petrol for a

period of one year commencing April 1, 1960, for B.C. Documents from Borough Engineer, Town Hall, Bridgwater. Tenders by Feb. 4.

Bridlington, Yorks.—Following during the 12 months commencing April 1, 1960, for B.C.: Macadam (slag) tar and bitumen coated, fine cold asphalt, chippings (stone, granite and slag), gravel, sand, concrete kerb, channel and flags, pitching and broken stone, tar (supply only), tar (supply and application by pressure sprayer), cold bitumen emulsion, hot bitumen (supply and application by pressure sprayer), cement, manhole covers and frames, gully grates and frames, salt-glazed ware pipes, Street gullies. Documents from the Engineer and Surveyor, Bridlington. Tenders by Feb. 3.

***Brighouse, Yorks.**—Supply of materials, for B.C. Tenders by Feb. 8.

Broadstairs and St. Peters, Kent.—Supply of materials for the 12 months commencing April 1, 1960, for U.D.C.: (1) Concrete kerbing and edging, paving flags and gully pots; (2) emulsified bitumen; (3) concrete aggregate and pit sand; (4) cement; (5) cold asphalt; (6) slag aggregate (bitumen macadam), slag aggregate (tarmacadam), slag aggregate (tarpaving); (7) surface dressing; (8) electrical supplies; (9) general stores and protective clothing. Documents from the Engineer and Surveyor, Piermont Hall, Broadstairs. Tenders by Feb. 3.

Buckinghamshire.—Supply of following for the year ending March 31, 1961, for C.C.: Works—(H 1) Road and bridge maintenance and strengthening works on priced schedule basis; (H 2) asphalt surfacing and repairs; (H 3) supplying and laying plastic white lines; (H 4) laying only bituminous macadam; (H 4a) supplying and laying dense tarmacadam and dense bitumen macadam; (H 24) painting road traffic signs, etc.; (H 25) fixing reflecting road studs; (H 26) surface dressing. Supply of road materials—(H 5) washed sand and ballast for construction works; (H 6) Portland cement; (H 7) granite setts; (H 8) precast concrete kerb, flags and edging; (H 9) iron castings (gully grates, weirs and manhole covers); (H 10) stoneware and clayware field drainpipes; (H 10a) concrete and concrete porous pipes; (H 14) standard road traffic signs, posts and fittings; (H 17) road surfacing materials; (H 18) broken stone, pitching and premixed water-bound macadam; (H 19) granite, limestone and slag chippings for surface dressings; (H 20) sand and shingle for gritting and surface dressings; (H 21) tar, bitumen, tar-bitumen compounds or cold bitumen emulsions for surface dressings. Documents from the County Surveyor, County Offices, Aylesbury. Tenders by Feb. 5.

Carshalton, Surrey.—Supply of approx. 20,000 gallons of commercial grade motor spirit during the year ending March 31, 1961, for U.D.C. Documents from C. H. Durrant, District Council Offices, The Grove, Carshalton. Tenders by Feb. 5.

Chester-le-Street, Dur.—Following for the year ending March 31, 1961, for R.D.C.: (1) Gravel, sand and whinstone; (2) bricks; (3) shovels, picks, pick shafts, brooms, brushes and buckets; (4) ranges, baths, lavatory and w.c. basins, hardware, sundries, etc.; (5) glazed earthenware, sanitary pipes, junctions and bends, etc.; (6) Portland cement; (7) manhole covers and frames, step irons and inspection chamber covers; (8) concrete pipes and bends; (9) disinfectants; (10) tyres and tubes; (11) lubricating oils, greases and motor fuel; (12) paints, paint brushes, linseed oils, white spirit and glass; (13) batteries and sparking plugs; (14) electrical supplies; (15) dustbins and lids. Documents from W. Hughes, surveyor, Union Offices, Chester-le-Street. Tenders by Feb. 19.

Colne Valley, Yorks.—Supply of materials during the 12 months commencing April 1, 1960, for U.D.C.: (1) Cement; (2) prepared tar for surface dressing (bulk and in barrels); (3) bitumen for surface dressing (bulk and in barrels); (4) bituminous cold emulsion (in barrels only); (5) tarmacadam to B.S. specification; (6) tarmacadam to W.R.C.C. specification; (7) bituminous macadam, cold asphalt and sealing grit to B.S. specification; (8) bituminous macadam, cold asphalt and sealing grit to W.R.C.C. specification; (9) chippings and dust; (10) broken stone and pitching; (11) sand and gravel; (12) stone kerbs, paving slabs and edgings; (13) concrete kerbs, channel blocks and paving slabs; (14) salt glazed ware pipes and specials; (15) porous concrete pipes; (16) salt glazed ware gullies; (17) cast-iron gullies, grates and manhole covers. Documents from the Surveyor, Municipal Offices, Carr Lane, Slaithwaite, Huddersfield. Tenders by March 4.

Coventry.—Supply of following during period April 1, 1960, to March 31, 1961, for B.C.: (1) Bricks, cement and other building materials; (2) granite, tarmac, precast concrete and other road materials; (3) salt glazed ware, etc.; (4) iron castings; (5) paints. Documents from City Engineer, Council House, Coventry. Tenders by Feb. 4.

Dewsbury, Yorks.—Following for a period of 12 months commencing April 1, 1960, for B.C.: (1) Granite and limestone macadam chippings; (2) York stone kerb, flags and setts; (3) tarred bituminous granite, slag, limestone, and asphaltic and other toppings; (4) concrete flags and kerbs; (5) surface dressings, tars, bitumens, pitch, creosote, surface spraying; (6) iron castings; (7) Portland cement; (8) sand, gravel, broken stone, pitching; (9) salt glazed pipes and fittings; (10) steel reinforcement; (11) bricks (common and engineering). Documents from Engineer, Municipal Buildings, Halifax Road, Dewsbury. Tenders by Feb. 8.

Dundee.—Supply of 10cwt. of solder, for Corporation Water Department. Documents from the Engineer and Manager, Dundee Corporation Water Department, 1 Shore Terrace, Dundee. Tenders by Feb. 8.

East Riding.—Following during the year ending March 31, 1961, for C.C.: (1) Tarmacadam and bitumen macadam (supplying); (2) T.V.O., gas oil/diesel oil, derv and paraffin; (3) tar; (4) liquid bitumen; (5) cold bitumen emulsion; (6) cold asphalt; (7) concrete kerb, flags, channels and edging; (8) concrete road gullies; (9) concrete cylindrical pipes; (10) concrete porous pipes; (11) sanitary pipes; (12) agricultural land pipes; (13) reflecting road studs (supply and/or fix); (14) heating and planing of road surfaces; (15) lubricating oils; (16) concrete blocks; (17) transport of Barber-Greene machine; (18) plastic white lines (supply and/or lay); (19) ready mixed concrete; (20) stone, rubble and pre-mixed waterbound macadam; (21) surface dressing of roads; (22) daywork by team labour and motor lorries. Documents from the Surveyor, County Hall, Beverley. Tenders by Feb. 8.

Fareham, Hants.—Following for the year ending March 31, 1961, for U.D.C.: (1) Cement, lime, whiting, Sirapite; (2) graded concrete aggregates, sea ballast and sand; (3) supplying and laying hot asphalt; (4) hire of lorries; (5) disinfectants and soap; (6) lubricating oils and greases (proprietary brands); (7) petrol and fuel oil (proprietary brands); (8) winding public clocks. Documents from Engineer and Surveyor, Westbury Manor, Fareham. Tenders by Feb. 17.

***Farnham, Surrey.**—Supply of materials, for U.D.C. Tenders by Feb. 10.

Gloucester.—Supply of the following during the year commencing April 1, 1960, for City Council: (1) Concrete paving slabs; (2) concrete kerb and edging; (3) granite chippings; (4) refined tar and bituminous compounds; (5) clean and treated road stone; (6) gravel and sand; (7) motor hauling; (8) castings; (9) dustbins; (10) protective clothing; (11) brushes; (12) cement; (13) petroleum products; (14) lubricating oils; (15) ready mixed concrete. Documents from the City Engineer and Surveyor, 21 Eastgate Street, Gloucester. Tenders by Feb. 3.

Grantham, Lincs.—Following materials during the year ending March 31, 1961, for B.C.: Dry and coated road stone, cold asphalt, gravel, sand, cement, concrete paving slabs, kerbs, footpath edging, petrol, derv., coal and coke. Documents from the Engineer and Surveyor, Guildhall, Grantham. Tenders by Feb. 5.

Haslingden, Lancs.—Following materials for the year ending March 31, 1961, for B.C.: (1) Castings; (2) concrete kerbs, flags and edging; (3) hot bitumen, tar and bitumen compound, bitumen emulsions; (4) tarred and bituminous macadam, fine cold asphalt, premixed water-bound macadam; (5) limestone and granite roadstone and chippings; (6) glazed stoneware pipes and fittings; (7) bricks; (8) scavenging brushes; (9) road sweeper brushes (Lewin mechanical order); (10) concrete aggregates; (11) concrete—bulk deliveries; (12) coke. Documents from the Surveyor, Municipal Offices, Haslingden, Rossendale. Tenders by Feb. 20.

Hastings, Sussex.—Following during the year commencing April 1, 1960, for B.C.: (a) Paint (ex local merchants only); (b) paint brushes and distemper brushes; (c) brooms and brushes; (d) dustbins; (e) disinfectants; (f) canvas; (g) soaps; (h) towelling and dusters; (i) toilet paper; (j) tarspraying; (k) coal (Education Committee); (l) coal (general); (m) coke; (n) hired haulage. Documents from Engineer, 37 Wellington Square, Hastings. Tenders by Feb. 8.

Hastings, Sussex.—Supply of the following, for B.C.: Approx. 50 tons $\frac{1}{2}$ in. clean cubical pink granite chippings; approx. 185 tons $\frac{1}{2}$ in. clean cubical pink granite chippings, delivered by rail in full truckloads to West Marina Station, Hastings, and by road direct to Corporation Depot, Hastings. Samples of chippings, stating quarry, shall be sent to the Borough Engineer, 37 Wellington Square, Hastings, at the same time as the tender is submitted. Tenders to N. P. Lester, town clerk, Town Hall, Hastings, by Feb. 8.

Heywood, Lancs.—Supply of the following for the year ending March 31, 1961, for B.C.:

Granite chippings; limestone chippings; setts, flags and kerbs (local stone); broken stone; stoneware pipes, etc.; filled pitch; cement; iron castings; scavenger brooms; refills for machine brush; paint and varnish; paint brushes; concrete flags and kerbs; coated macadam; surface dressing; petrol. Samples and specifications may be seen and forms of tender obtained on application to A. Middleton, borough engineer and surveyor, Municipal Buildings, Heywood, and applications, accompanied by addressed foolscap envelopes, by Feb. 3. Tenders by Feb. 6.

Houghton-le-Spring, Dur.—Following materials for the year commencing April 1, 1960, for U.D.C.: (a) Building materials for the erection of approx. 126 dwellings and for the general maintenance of 4,644 existing houses; (b) highways materials. Applications to Engineer and Surveyor, Scruton House, Newbottle Street, Houghton-le-Spring, by Feb. 3. Tenders by Feb. 26.

Ipswich, Suffolk.—Supply of following during the 12 months commencing April 1, 1960, for B.C.: Cement; aggregates and sand; dry granite; tarred granite or slag; bitumen coated granite; spun-concrete pipes; bitumen road emulsion; precast concrete flagstones; precast concrete kerbs and channels; salt-glazed ware pipes; manhole covers and gully gratings and frames; supplying and laying bitumen coated granite; general haulage and haulage of sewage sludge; precast concrete gully pots; precast concrete manhole units; chain link fencing and concrete posts. Documents from the Engineer and Surveyor, 19 Tower Street, Ipswich. Tenders by Feb. 15.

Jarrow, Dur.—Following for a period of 12 months ending March 31, 1961, for B.C.: (1) Sands, gravel and crushed stone; (2) dry slag; (3) precast concrete kerbs, flags and edgings; (4) tarmacadam, bitumen macadam, cold asphalt; (5) surface dressing; (6) mechanical haulage; (7) cast-iron goods; (8) salt-glazed ware pipes; (9) coal and coke; (10) dustbins; (11) window cleaning. Documents from the Borough Engineer, Town Hall, Jarrow. Tenders by Feb. 16.

Kent.—Supply of road materials and services for the year commencing April 1, 1960, for C.C.

King's Lynn, Norfolk.—Supply of materials, for B.C. Tenders by Feb. 17.

Littleborough, Lancs.—Supply of materials, for U.D.C. Tenders by Feb. 13.

Llanelli, Carm.—Following, for B.C.: Contract 1—Ironmongery; 2—earthenware pipes; 4—castings; 5—cement; 6—motor haulage; 7—coal; 8—bricks; 9—team work; 10—tarmacadam; 11—car hire; 12—road materials; 13—paints (woodwork and ironwork); 14—petrol, diesel oil; 15—funeral furnishings; 16—officers' uniforms (with sample serge). Documents from the Borough Surveyor, Town Hall, Llanelli, for tenders 1-14, and from S. Samuel, town clerk, Town Hall, Llanelli for tenders 15 and 16. Tenders by Feb. 6.

Llantrisant and Llantwit Fardre, Glam.—Following during the financial year ending March 31, 1961, for R.D.C.: (1) Cement; (2) sand; (3) stone chippings; (4) coal; (5) paint (Dulux); (6) wooden fence posts; (7) chain link fencing; (8) stoneware pipes; (9) overall suits. Documents from the Engineer and Surveyor, Council Offices, Danygraig, Llantrisant. Tenders by Feb. 15.

Merthyr Tydfil, Glam.—Supply of materials for the 12 months commencing April 1, 1960, for B.C. Tenders by Feb. 20.

Milnrow, Lancs.—Following for the year commencing April 1, 1960, for U.D.C.: (1) Concrete kerbs, flags and back edging; (2) tarred and bituminous limestone; (3) tarred and bituminous granite; (4) cold asphalt; (5) sealing grit; (6) coarse and fine aggregate; (7) building sand; (8) road salt; (9) cold bituminous emulsion; (10) granite and limestone chippings. Documents from the Engineer and Surveyor, Council Offices, Milnrow. Tenders by Feb. 8.

Morecambe and Heysham, Lancs.—Following, for B.C.: (1) Cast-iron pipes and specials; (2) cement (all grades); (3) granite chippings; (4) granite concrete flags and kerbs; (5) limestone pitching and crushed limestone; (6) sands, gravels; (7) tarmacadam (all grades); (8) surface dressing by tank sprayer, inclusive of refined hot road tar required; (9) grade four rock salt. Documents from the Borough Engineer and Surveyor, Town Hall, Morecambe and Heysham. Tenders by Feb. 19.

Neath, Glam.—Following, for the period of 12 months from April 1, 1960, to March 31, 1961, for B.C.: (a) Tarmacadam and bituminous macadam; (b) broken stone and chippings; (c) cement paving, kerbing and channelling; (d) haulage (lorries and horse cart); (e) paint, varnish, etc.; (f) cement; (g) oils; (h) coal; (i) road castings. Documents from the Borough Engineer, Gwyn Hall, Neath. Tenders by Feb. 13.

***Norwich.**—Supply of materials, for City Council. Tenders by Feb. 13.

Prescot, Lancs.—Supply of road materials, cement, stoneware pipes, paints, hire of steam rollers and lorries, etc., for the year ending March 31, 1961, for U.D.C. Documents from F. A. Gregson, engineer and surveyor, Council Offices, Prescot. Tenders by Feb. 6.

Redditch, Worcs.—Following materials during the year April 1, 1960, to March 31, 1961, for U.D.C.: (1) Tarmacadam; (2) tarred limestone; (3) dry broken stone; (4) washed gravel; (5) concrete kerbs; (6) concrete flags. Documents from the Engineer and Surveyor, Council House, Redditch. Tenders by Feb. 12.

***Rowley Regis, Staffs.**—Supply of materials, for B.C. Tenders by Feb. 12.

***Rugby, War.**—Supply of materials, for B.C. Tenders by Feb. 13.

***Sheffield.**—Supply of materials, for City Council. Tenders by Feb. 5.

***Sittingbourne and Milton, Kent.**—Supply of materials, for U.D.C. Tenders by Feb. 10.

Slough, Bucks.—Following during the year commencing April 1, 1960, and ending March 31, 1961, for B.C.: (1) Tarmacadam; (2) fine coat asphalt and tack coat; (3) ballast, hoggins, sand and shingle; (4) stoneware and concrete pipes and concrete gully pots; (5) precast concrete kerbs, flags and edging; (6) cast-iron manhole covers and frames, and gully grates and frames; (7) brooms. Documents from Borough Engineer, Town Hall, Slough. Tenders by Feb. 1.

Stamford, Lincs.—Supply of the following materials and/or execution of work for the period ending March 31, 1961, for B.C.: (a) Tarred slag and/or granite, bituminous macadam; (b) clean granite and slag chippings; (c) gravel and sand; (d) pitching stone; (e) concrete kerb and edging; (f) dressed granite edged kerb; (g) concrete flags; (h) sawn natural stone flags; (i) surface dressing; (j) petroleum spirit. Documents from Borough Surveyor, Town Hall, Stamford. Tenders by Feb. 5.

Swadlincote, Derbys.—Supply of the following materials for the year ending March 31, 1961, for U.D.C.: Tarred limestone and tarred granite; bituminous limestone and bituminous granite; lightly tarred granite chippings; limestone—wet mix; dry stone and chippings (granite and limestone); washed crushed gravel; road tar (type A), including spraying on to roads; fine cold asphalt; Portland cement; petroleum spirit and lubricating oils; dustbins; concrete kerbs and paving slabs; rebripping of Lewin road sweeper brushes. Documents from the Engineer and Surveyor, Bank House, Midland Road, Swadlincote. Tenders by Feb. 15.

***Turton, Lancs.**—Supply of materials, for U.D.C. Tenders by Feb. 24.

Tynemouth, Northumb.—Following materials for the year ending March 31, 1961, for B.C.: British Portland cement; Whinstone, gravel and sand aggregates; tarmacadam, bitumen macadam and fine cold asphalt; road surfacing and reinstatement works in asphalt; concrete flags and kerbs; lime mortar; sanitary pipes; washleathers, nails and screws; paints; paint brushes; printing paper and linen; electric lamps and cable; lamp columns, lanterns and fittings; taking-up and laying flags and kerbs; housing electric accessories. Documents from D. M. O'Herlihy, surveyor, 16 Northumberland Square, North Shields. Tenders by Feb. 15.

***Uxbridge, Middx.**—Supply of materials, for B.C. Tenders by Feb. 22.

Walthamstow, Essex.—Following materials and services for the year ending March 31, 1961, for B.C.: (1) Cement; (2) hydrated lime; (3) clinker; (4) granite aggregate; (5) sand; (6) aggregates for concrete; (7) shingle; (8) hoggins; (9) ready-mixed concrete; (10) road tar; (11) bitumen emulsion; (12) bituminous concrete; (13) bitumen macadam; (14) tarmacadam; (15) cold asphalt; (16) hot-rolled asphalt and precast chippings; (17) salt glazed ware pipes and fittings; (18) petrol, diesel oil, paraffin, etc.; (19) fuel oil (20) uniforms and protective clothing; (21) plant hire; (22) window cleaning; (23) soaps, etc.; (24) toilet paper; (25) electric cords and cables; (26) electric lamps (tungsten, sodium, fluorescent, etc.). Documents from the Architect, Town Hall, Walthamstow, E.17. Tenders by Feb. 8.

Walton and Webridge, Surrey.—Following for the year ending March 31, 1961: (1) Granite chippings; (2) tar; (3) tarmacadam (supplying only); (4) tarred gravel (supplying only); (5) bituminous gravel (supplying only); (6) scavengers' brooms; (7) concrete kerbs; (8) shingle; (9) sand and ballast; (10) concrete path edging; (11) cement; (12) supplying and laying by Barber-Greene, bituminous and tarmacadam base and carpeting coats; (13) supplying and laying by Barber-Greene, hot rolled asphalt carpeting coat. Documents from the Engineer and Surveyor, Council Offices, Walton-on-Thames. Tenders by Feb. 5.

***Warrington, Lancs.**—Supply of materials and stores for the 12 months ending March 31, 1961, for B.C. Tenders by Feb. 8.

Washington, Dur.—Following materials for the 12 months commencing April 1, 1960, for U.D.C.: Road materials, earthenware pipes, sand, gravel, petrol and diesel oil. Documents from the Surveyor, Council Chambers, Washington. Tenders by Feb. 29.

Watford, Herts.—Following for the year ending March 31, 1961, for B.C.: Gravel, sand and ballast; tar for surface dressing; tarmacadam and cold asphalt; concrete paving slabs and kerbs; granite chippings; protective clothing; sweeping machine brush refilling; manhole covers and frames; gully gratings and frames; window cleaning; electric lamps and tubes; toilet rolls; petrol and diesel oil; paraffin and T.V.O.; fuel oil; dustbins; trench reinstatements; salvaged paper. Documents from the Borough Engineer, Town Hall, Watford. Tenders by Feb. 10.

West Riding.—Following, for C.C.: Dry aggregates and sand for concrete; ready mixed concrete; crushed sandstone. Documents from the Engineer and Surveyor, County Hall, Wakefield. Tenders by Feb. 1.

Wolverhampton.—Supply of the following for a period of 12 months from April 1, 1960, for B.C.: (1) Iron castings for gully gratings, manhole covers, etc.; (2) tarred macadam; (3) bitumen macadam; (4) asphalt—B.S.594 (reinstatement purposes only); (5) cold asphalt; (6) tar and bituminous compounds for surface dressing; (7) concrete flags; (8) concrete kerbs; (9) granite kerbs; (10) gravel; (11) granite or basalt chippings; (12) stoneware pipes; (13) bricks (hard common, brindled and engineering bricks); (14) Portland cement; (15) sand; (16) cleft chestnut fencing. Documents from the Borough Engineer, Town Hall, Wolverhampton. Tenders by Feb. 8.

Workington, Cumb.—Following materials for the period of 12 months ending March 31, 1961, for B.C.: (1) Dry limestone and bituminous limestone macadam; (2) dry granite and bituminous granite macadam; (3) fine cold asphalt; (4) premixed waterbound macadam; (5) sand; (6) cement; (7) manhole covers and gully gratings and frames; (8) concrete flags, kerbs and channels; (9) haulage; (10) overalls; (11) paint. Documents from the Borough Engineer and Surveyor, "Stoneleigh," Park End Road, Workington. Tenders by Feb. 11.

PLANT AND MECHANICAL TRANSPORT

Basingstoke, Hants.—Supply and erection of three electrically driven pumps at Victory Square pumping station, for B.C., each with a capacity of 2,540 g.p.m. of unscreened crude sewage, against a total head of approx. 100ft. The pumps shall be complete with motors, starters, actuating mechanism and all ancillary equipment. Documents from Lemon and Blizard, consulting engineers, 59 Tufton Street, Westminster, S.W.1. Deposit £3 3s., cheques payable to B.C. Tenders by March 8.

***Birkenhead.**—Supply omnibus chassis and bodies, for B.C. Tenders by Feb. 13.

Corwall.—Supply and delivery of the following, for C.C.: (a) One 30cwt. diesel lorry; (b) four 3-ton diesel tipping lorries; (c) two 30cwt. vans; (d) four Massey-Ferguson 35 or equivalent industrial diesel tractors; (e) two 10/7 concrete mixers; (f) one loading shovel; (g) one 30cwt. vibrating tandem roller; (h) two hand-guided self-propelled 7cwt. vibrating rollers; (i) one hand-propelled 3cwt. vibrating roller; (j) four portable self-contained petrol-operated road breakers. Documents from the County Surveyor, County Hall, Truro. Tenders by March 5.

Dagenham, Essex.—Supply of one three-ton trailer, low-loading type, all-steel body, with in. gauge steel floor, over wood and fitted three run up steel runners, for B.C. Documents from the Engineer and Surveyor, Civic Centre, Dagenham. Tenders by Feb. 10.

***Dorset.**—Supply of vehicles A, B and C, for C.C. Tenders by Feb. 12.

Flintshire.—Following, for C.C.: (1) Light trucks or vans; (2) Ferguson 35 and 65 tractors and attachments (including grass cutting and verge trimmer), diesel or petrol; (3) motor-cycles and sidecars; (4) hydraulic tipping trailer; (5) tar boilers; (6) concrete mixers; (7) compressors; (8) vibrating rollers. Documents from E. W. W. Richards, surveyor, County Buildings, Mold. Tenders by Feb. 8.

Huddersfield, Yorks.—Supply of five (3-ton) Ford Trader commercial tipping vehicles with bodies to Corporation specification and one (3-ton) Ford Trader commercial chassis, low frame, for B.C. The successful tenderer will be required to enter into a written contract and also to take in part exchange five Albion petrol driven lorries and one 3-ton Dennis chassis, further information concerning which may be obtained from the Cleansing and Haulage Superintendent, Vine Street Garage, off Leeds Road, Huddersfield. Tenders to Harry

Bann, town clerk, Town Hall, Huddersfield, by Feb. 8.

Ilkley, Yorks.—Supply of a Ferguson 35 de luxe diesel engine tractor, fitted with a model 735 loading shovel, cab, lighting set and oversize tyres, for U.D.C. The Council's 1951 model Ferguson tractor and loading shovel are to be taken in part exchange. Documents from the Engineer and Surveyor, Chantry Drive, Ilkley. Tenders by Feb. 6.

Limavady, Derry.—Sewerage scheme, contract 2, for U.D.C. Supply and erection on site of: (a) Sewage and sludge liquor pumping plant; (b) sedimentation tank sludge scrapers; (c) flow recorder and control equipment; (d) percolating filter distributors and dosing syphons, and for the supply and delivery to site of; (e) valves, penstocks and screens. Documents from Munce and Kennedy, engineers and architects, 133 University Street, Belfast. Tenders by Feb. 9.

***Merionethshire.**—Supply of various plant for the Highways and Bridges Department, for C.C. Tenders by Feb. 10.

Merionethshire.—Delivery of the following during the first week of April, 1960, for C.C.: One Traxcavator or similar type of excavator; two dumpers; four concrete mixers up to 7½ type; two 5½-ton short wheel base tipper lorries, diesel engines; two lorries (three-ton Morris Commercial, 1948 and seven-ton petrol Bedford tipper) are offered in part exchange for the new lorries. These lorries may be inspected by appointment with the County Surveyor at these offices. Tenders, accompanied by maker's specification and other details, enclosed in a plain sealed envelope, endorsed "Tender for Plant," to the County Clerk, County Offices, Dolgellau, by Feb. 10.

Ogwen, Caerns.—Supply to Bangor of one diesel-engined refuse collecting vehicle of a capacity of 10 or 12 cu. yd., for R.D.C. Tenders must be accompanied by comprehensive specifications, and indicate a firm delivery date. The tenders are to include for painting and lettering. Tenderers may be required to take the vehicle on a trial run over a selected route. Tenders in plain sealed envelopes, endorsed Refuse Collecting Vehicle, to Haydn A. Davies, clerk of the Council, Council Offices, Craig Bueno, Garth Road, Bangor, Caerns, by Noon, Feb. 5.

Rainford, Lancs.—Supply of a motor lorry, and steam or mechanical roller (road or footpath), for year commencing April 1, 1960, for U.D.C. Documents from the Surveyor, Council Offices, Rainford. Tenders by Feb. 13.

Salford, Lancs.—Following contract Veh. 1/60, for City Transport: (a) Two B.M.C. 3-ton lorries with Bromilow and Edwards tipping gear and bodies; (b) one B.M.C. 30cwt. forward control van. Documents from the General Manager and Engineer, Salford City Transport, Frederick Road, Salford, 6. Tenders by Feb. 3.

Stoke-on-Trent.—Supply and delivery of three new 15cwt. Bedford vehicles with builders' truck body, also one new 4-ton Bedford chassis, for City Council. Documents from the Transport Manager, Booth Street, Stoke-on-Trent.

PLAYING FIELDS, PARKS, ETC.

***Bury, Lancs.**—Construction of a bowling green at Hoyle Playing Fields, for B.C. Tenders by Feb. 8.

Cheshire.—Preparation and layout of school playing fields and surrounds, for Education Committee, involving excavation, levelling, drainage and general preparation at the following sites: West Kirby Blackhorse Hill County Primary, three acres; Ellesmere Port County Grammar (surrounds only) 1.75 acres; Upton Acresfield County Primary, 3.5 acres; Eastham Glenburn County Primary, three acres; Gatley County Primary, two acres; Kingsley County Secondary, three acres; Middlewich County Secondary, five acres; Marple County Secondary, 10.5 acres; Cheadle Hulme Thorn Grove County Primary (drainage only), 2.5 acres; Hyde County Grammar (drainage only), five acres. Documents from John G. Kellett, director of education, County Hall, Chester. Deposit £3 3s. each contract. Tenders by Feb. 8.

ROADS, BRIDGES AND SITE WORKS

Adwick-le-Street, Yorks.—Laying out road, lawns and boundary fences, etc., in connection with the extension of Red House Lane Cemetery, for U.D.C. Documents from W. S. Ellis, engineer and surveyor, Council Offices, Adwick-le-Street. Deposit £2 2s.

Banchory, Kincardines.—Relaying of kerb, formation of footpaths and surfacing of carriageway of two streets, for B.C. Documents from the Burgh Surveyor, Burgh Buildings, Banchory. Tenders by Feb. 5.

Basildon, Essex.—Re-laying of approx 2,100 super. yd. of flagged paving, together with

incidental works, at Wickford Vange and Basildon, for U.D.C. Documents from the Engineer and Surveyor, 108 High Street, Billericay. Tenders by Feb. 5.

***Birmingham.**—Reinstatement Park Street Gardens disused cemetery, for City Council. Deposit £2 2s. Tenders by Feb. 10.

***Birmingham.**—Surface dressing various roads, for City Council. Deposit £2 2s. Tenders by Feb. 15.

***Buckinghamshire.**—Making up Latchmoor Way, for C.C. Deposit £2. Tenders by Feb. 15.

Camberwell.—Following to be laid on existing foundations, for B.C.: (a) Mastic asphalt with rock non-skid finish, Old Kent Road—1,550 sq. yd. approx., East Dulwich Grove—1,552 sq. yd. approx.; (b) two course hot rolled asphalt (B.S.S. 594—1958), Half Moon Lane—2,000 sq. yd. approx. Documents from Borough Engineer and Surveyor, Town Hall, Camberwell, S.E.5. Tenders by Feb. 15.

Carlisle, Cumb.—Wigton Road improvement, for City Council. Tenders are invited for the above, comprising the reconstruction of the existing highway, with a pitched base and hot rolled asphalt surface, the provision of new service roads in wet-mix macadam base with cold rolled asphalt surfacing, together with surface water drainage and accommodation works. Documents from City Surveyor, 18 Fisher Street, Carlisle. Tenders by Feb. 4.

***Chelmsford, Essex.**—King's Head Meadow car park, second stage, for B.C. Tenders by Feb. 17.

Cheltenham, Glos.—Reconstruction of Hatherley Lane, for B.C., comprising reconstruction of approx. 9,000 sq. yd. of carriageway, 4,000 sq. yd. of asphalt footpath, 700 lin. yd. of 9in. and 12in. dia. surface water sewer and appurtenant works. Documents from G. Gould Marsland, engineer, Municipal Offices, Cheltenham. Deposit £3 3s. Tenders by Feb. 11.

Chester.—Plas Newton Lane improvement, contract 572, for City Council, comprising approximately 1,100 lin. yd. of 24ft. carriageway, two 13ft. footways, 2,100 lin. yd. of glazed stoneware foul and surface water sewer works from 9in. diameter to 12in. diameter. Documents from Engineer and Surveyor, 49 Northgate Street, Chester. Tenders by Feb. 6.

Dagenham, Essex.—Romford Road—widening of carriageway and footpaths, together with surface water drainage between Fowler Road and north boundary of Golf Course House, for B.C., consisting of laying approx. 5,200 sq. yd. of reinforced concrete carriageway and 5,000 sq. yd. bituminous macadam carriageway kerbing, macadam footways and ancillary works. Documents from Engineer and Surveyor, Civic Centre, Dagenham. Deposit £2 2s. Tenders by Feb. 6.

***Doncaster.**—Reconstruction of A.1 Bawtry Road, contract 53, for B.C. Deposit £3 3s. Tenders by Feb. 15.

Down.—Construction of two bridges and ancillary works at Comber, for C.C. Each bridge will consist of reinforced concrete piers and bank seats and a three-span reinforced concrete deck, the centre span comprising two cantilever arms supporting a central suspended span. One bridge, 116ft. long and 44ft. wide, will carry High Street over a new road and the other bridge, 130ft. long and 38ft. wide, will carry a new road over Glen Road. Documents from engineers, Sir William Halcrow and Partners, 10 Malone Road, Belfast, 9. Deposit £5 (cheques payable to C.C.). Plans also seen at the offices of the County Surveyor, English Street, Downpatrick. Tenders by Feb. 17.

***Epsom and Ewell, Surrey.**—Construction of footpath, for B.C. Deposit £2 2s. Tenders by Feb. 8.

Essex.—Construction of piers on both sides of the Grays-Tilbury town railway line, for C.C. The work consists of constructing two piers having a total length of approx. 250ft. on 136 bored piles, each pile approx. 40ft. long. Documents from the County Surveyor, Old Court, Chelmsford. Deposit £2. Tenders by Feb. 15.

***Grantham, Lincs.**—Heating and planing carriageway, for B.C. Tenders by Feb. 5.

Hastings, Sussex.—Supply of the following materials and laying by machine and hand at various sites within the borough, for B.C.: ½in. fine cold asphalt carpet with ½in. pre-coated chippings; ½in. hot-rolled asphalt carpet with ½in. pre-coated chippings; 1½in. (nominal) bituminous macadam base course; ½in. graded bituminous macadam regulating course. Documents from the Borough Engineer, 37 Wellington Square, Hastings. Tenders by Feb. 15.

***Hertfordshire.**—Roestock Road improvement works, for C.C. Tenders by Feb. 10.

Heston and Isleworth, Middx.—Super-elevation of bend, resurfacing and construction lay-by in Spring Grove Road between its junctions with Kingleys Road and Jersey Road, for B.C. Documents from the Borough Engineer's

Department, 88 Lampton Road, Hounslow. Deposit £2 2s. Tenders by Feb. 5.

Hoddesdon, Herts.—Construction of a lay-by with paved area in front of the four shops at The Drive, for U.D.C. Documents from the Engineer and Surveyor, Woodlands, High Street, Hoddesdon. Tenders by Feb. 5.

Hungerford, Berks.—Reconstruction of the estate road at The Crescent, Kintbury, for R.D.C., comprising the laying of some 400 super. yd. tarmacadam carriageway, together with footways, site and other ancillary works. Documents from E. L. Hawkins, surveyor, The Priory, Hungerford. Deposit £2, cheque payable to R.D.C. Tenders by Feb. 10.

Kent.—Approx. 120,000 cu. yd. of excavation in clay and gravel and for the deposit and compaction of the material, both at the verge of the A.2 trunk road at Swanscombe, for C.C. Documents from the County Surveyor, County Hall, Maidstone. Tenders by Feb. 5.

Leeds.—Kerbing, tarmacadam footpaths and carriageways in the following streets, for City Council: East Moor Avenue (footpath only, north side); Falkland Grove; Farm Mount; Sholebroke Street (part). Documents from the Highways Engineer, 155 Kirkstall Road, Leeds, 4. Deposit £1 1s. Tenders by Feb. 4.

***Leicester.**—Making up Marsden Avenue, for C.C. Deposit £5. Tenders by Feb. 12.

***Liverpool.**—Construction of a bridge, for City Council. Tenders by Feb. 13.

Londonderry.—Reconstruction of trunk road, T.7, Coleraine to Limavady, for C.C. The work comprises the construction of approximately two miles of new carriageway in bituminous macadam and involves approximately 150,000 cu. yd. of excavation and the supply of approximately 15,000 cu. yd. of fill, together with other ancillary works. Documents from H. K. Scott, county surveyor, Courthouse, Coleraine. Deposit £5 5s. Tenders by Feb. 12.

Malden and Coombe, Surrey.—Road and paving works at housing site 77, Balgown Close, for B.C. Works comprise the construction of new concrete service road (500 sq. yd.) and provision of new a.s.p. footpaths. Applications to John Apse, borough engineer, Municipal Offices, New Malden.

Newcastle upon Tyne.—Removal of the pit heap at Montague Colliery (Caroline Pit), Slatford Lane, to tipping sites at a distance of approx. four miles, for City Council. The heap contains approx. quarter million cu. yd. of material, and the work includes for the removal of vegetable soil from the tipping areas and respreading over tipped material on completion, together with the provision and subsequent removal of access roads. Documents from the City Engineer, Town Hall, Newcastle upon Tyne. Tenders by Feb. 4.

Newport, Mon.—Nash Road (part) reconstruction (600yd. approximately), for B.C., comprising kerbing, channelling, tarmacadam footways, bituminous macadam regulating course to the carriageway and ancillary works. Documents from Borough Engineer, Civic Centre, Newport. Deposit £2 2s. Tenders by Feb. 4.

Norfolk.—Construction of reinforced concrete roads at: (1) Clenchwanton; and (2) Nordelph, for C.C. Applications to the County Land Agent, 20 Hill House Road, Norwich, by Feb. 4.

Oldbury, Worcs.—Approximately 3,000yd. of kerb and channel and approx. 4,400 sq. yd. of concrete flagging at Lion Farm estate and Brandhall estate, for B.C. Documents from the Engineer and Surveyor, Municipal Bank Chambers, Oldbury. Deposit £2 2s., cheques payable to B.C. Tenders by Feb. 10.

Penistone, Yorks.—Following, for R.D.C.: (1) Service road and footpaths and (2) erection of 10 bungalows at Roper Lane, Thurgoland, near Sheffield. Applications to Noel Heppenstall, architect, 135 Armitage Road, Milnsbridge, Huddersfield, by Feb. 3. Deposit £2 2s. each contract, cheques payable to R.D.C. Tenders by March 3.

Port Talbot, Glam.—Completion of roads, George site, Sandfields, for B.C., comprising approx. 12,500 sq. yd. of road surfacing, 1,350 lin. yd. of kerbing, 83 road gullies and frames, and 2,400 sq. yd. of footpaths. Documents from G. V. Griffiths, borough engineer, Municipal Buildings, Port Talbot. Deposit £2 2s. Tenders by Feb. 15.

***Richmond, Surrey.**—Maintenance of highways during the period April 1, 1960, to March 31, 1961, for B.C. Tenders by Feb. 12.

Runcorn, Ches.—Making-up of Heath Drive, for U.D.C., comprising approx. 150 lin. yd. of sub-soil drainage, 74 lin. yd. of kerbing and channelling, 624 sq. yd. of waterbound macadam sub-base, 1,004 sq. yd. of bituminous surfacing, together with 795 lin. yd. of footway paving and appurtenant works. Documents from the Surveyor, Town Hall, Runcorn. Deposit £2 2s. Tenders by Feb. 16.

St. Asaph, Flints.—Construction of roads, footpaths and incidental works at Bro Havard,

for R.D.C. Applications to F. C. Roberts, architect, Earl Chambers, Mold. Deposit £2 2s. Tenders by Feb. 1.

***Sale, Ches.**—Making up various streets, for B.C. Deposit £2 2s. each contract. Tenders by Feb. 15.

Scotland.—Reinforced concrete plant foundations, cable trenches, etc., for Lunanhead substation, Lunanhead, near Forfar, for Hydro-Electric Board. Documents from R. B. Anderson, the Area Offices, 7 Dudhope Crescent Road, Dundee. Tenders by Feb. 16.

Southborough, Kent.—Carrying out of surface dressing to roads within the Urban District, and for the supply and delivery of cold emulsion, tarred Kent ragstone, sand, unscreened ballast, crushed shingle and Portland cement, for U.D.C. Documents from the Surveyor, Council Offices, Southborough, Tunbridge Wells. Tenders by Feb. 9.

***Southgate, Middx.**—(A) Supply of road materials, (B) road works, for B.C. Tenders by Feb. 8.

Southport, Lancs.—Provision and mechanical laying of hot-rolled asphalt on the following roads, for B.C.: (1) Nevill Street—approx. 1,573 sq. yd. of hot-rolled asphalt in two courses to a total thickness of 2½ in.; (2) Liverpool Road—approx. 12,360 sq. yd. of hot-rolled asphalt carpet of lin. finished thickness; (3) Scarisbrick New Road—approx. 5,400 sq. yd. of hot-rolled asphalt carpet of lin. finished thickness; (4) Briar Road and Sandrock Road—approx. 2,500 sq. yd. of hot-rolled asphalt carpet of lin. finished thickness. Documents from the Borough Engineer, Town Hall, Southport. Deposit £2 2s., cheques payable to Corporation. Tenders by Feb. 4.

Stoke-on-Trent.—Street completion works at the following, for City Council: (a) Berry Hill neighbourhood unit, contract 1; (b) Bentilee Farm housing estate, Bucknall, contract, 9, comprising 10,600 sq. yd. 3 in. tarred macadam surfacing; 6,300 sq. yd. 2 in. concrete flag paving; 1,800 lin. yd. 5 in. x 10 in. precast concrete kerbing; 2,900 lin. yd. 2 in. edging kerb, together with other incidental works. Documents from the Engineer and Surveyor, Town Hall, Stoke-on-Trent. Deposit A, £2 and B, £1. Tenders by Feb. 3.

***Stoke-on-Trent, Staffs.**—Preliminary street works, etc., at Longton Hall Road housing site, for City Council. Deposit £3. Tenders by Feb. 3.

***Taunton, Som.**—Resurfacing Corporation Street, for B.C. Tenders by Feb. 8.

***Tonbridge, Kent.**—Construction of roads and sewers at Trench Wood North estate, for U.D.C. Deposit £2 2s. Tenders by Feb. 15.

Trowbridge, Wilts.—Construction of a new car park at Bythesea Road, for U.D.C. Work includes levelling and clearing the site; laying hardcore foundation and bituminous macadam surfacing; drainage; erection of retaining wall; and ancillary works. Documents from the Engineer and Surveyor, Town Hall, Trowbridge. Deposit £2 2s. Tenders by Feb. 9.

Truro, Corn.—Construction of a car park, removal of existing garages and other work at Trevaunance, St. Agnes, for R.D.C. Documents from A. J. Cornelius, architect, 13 Lemon Street, Truro. Tenders by Feb. 8.

Truro, Corn.—Making up of Tresawls Avenue approx. 287 yd. in length, for City Council. Documents from the Engineer and Surveyor, Municipal Buildings, Truro. Deposit £2 2s. cheque. Tenders by Feb. 23.

Tyrone.—Following, for C.C.: (1) Redecking of Croaghshane Bridge on unclassified road 150, five miles west of Killeter; (2) reconstruction of Usnagh culvert on unclassified road 1316, half a mile south of Beragh. Documents from Ian W. Leebody, county surveyor, County Surveyor's Office, 26 John Street, Omagh. Tenders by Feb. 12.

Weston-super-Mare, Som.—Surfacing of the Marine Parade, for B.C. Laying by machine of approximately 2,500 sq. yd. of fine cold asphalt and other appurtenant works. Applications to the Borough Engineer, Town Hall, Weston-super-Mare. Tenders by Feb. 2.

West Riding.—Remaking of drive and forming a turning space at the Occupation Centre, Lincoln House, Heckmondwike, for C.C. Applications to the Divisional Architect, Flint Street, Huddersfield, by Feb. 1. Tenders by Feb. 15.

Willesden, Middx.—Following works to be carried out in the financial year 1960-61, for B.C.: (Tender 1) Surface dressing—supplying and spraying approximately 20,400 gallons of tar or cut-back bitumen on roads within the borough (contractor's vehicle must be capable of towing the Council's gritter); (2) heating and planing—heating and planing approximately 10,000 sq. yd. of asphalt and tarmacadam in carriageways within the borough; (3) maintenance of footways (flag-paved)—maintenance of flag-paved footways within the borough; (4) maintenance of carriageways—hot asphalt—maintenance of hot asphalt surfac-

ing on roads within the borough, together with other incidental works connected therewith; (5) resurfacing of school playgrounds and paths in parks and cemeteries—resurfacing of school playgrounds, paths in Council parks and cemeteries, etc. Documents from the Engineer and Surveyor, Town Hall, Dyne Road, Kilburn, N.W.6. Deposit £1 each contract. Tenders by Feb. 17.

Wolverhampton.—Willenhall Road North to housing estate section 2, Essington Way extension, for B.C., comprising construction of 2,000 sq. yd. of carriageway with wet-mix foundations and bituminous macadam base course, together with 400 lin. yd. of 9 in. diameter foul and surface water sewers, including manholes and ancillary works. Documents from Borough Engineer, Town Hall, Wolverhampton. Deposit £2 2s. Tenders by Feb. 3.

***Worsley, Lancs.**—Making up Duchy Avenue, for U.D.C. Deposit £2 2s. Tenders by Feb. 6.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Aberdeenshire.—Following works in Methlick special drainage district, for C.C.: (1) Settling tank of 3,000-gallons capacity in mass and reinforced concrete; (2) 100 lin. yd. of 6 in. diameter ferro-concrete sewer. Documents from the Surveyor, 4 Albyn Place, Aberdeen. Deposit £2. Tenders by Feb. 5.

***Bagshot, Surrey.**—Sewage pumping station, New Road, for R.D.C. Deposit £2 2s. Tenders by Feb. 13.

Blaby, Leics.—Braunstone sewage disposal works extensions, comprising the following works, for R.D.C.: Five 38 ft. diameter circular reinforced concrete settling tanks; three 32 sq. ft. reinforced concrete digestion tanks; one 70 ft. diameter percolating filter in blue brickwork; three earth sludge lagoons; two pumping stations; one agricultural implement store, together with concrete roadworks, site-works and appurtenant works. Documents from F. W. James, engineer and surveyor, Council Offices, Yarborough. Deposit £10 10s. Tenders by Feb. 22.

Blofield and Flegg, Norfolk.—Sewer extension, Ormesby Road, Caister-on-Sea, for R.D.C., comprising construction of 500 yd. of 6 in. diameter salt-glazed ware pipes, and eight manholes. Documents from Surveyor, Council Offices, Acle, Norwich. Deposit £2 2s. (cheques payable to R.D.C.). Tenders by Feb. 15.

Bromsgrove, Wores.—Foul sewer at High House Drive, Lickey, for U.D.C., together with all ancillary works. The approximate quantities are as follows: 84 lin. yd. 6 in. diameter foul sewer. Documents from the Engineer and Surveyor, Council House, Bromsgrove. Deposit £2 2s. Tenders by Feb. 20.

***Caterham and Warlingham, Surrey.**—Surface water sewer, for U.D.C. Deposit £2 2s. Tenders by Feb. 26.

Chislehurst and Sidcup, Kent.—Construction of 200 lin. yd. of 12 in. diameter sewer, together with manholes and ancillary works, Elmstead Lane, Chislehurst, for U.D.C. Documents from Engineer and Surveyor, Manor House, Sidcup. Deposit £2 2s. Tenders by Feb. 8.

Dungannon, Tyrone.—Supply and delivery to Benburb, for R.D.C.: One centrifugal pump to deliver 1,000 gallons per hour, with a petrol or diesel engine mounted on a portable trolley or common bed plate. Documents from Muncie and Kennedy, consulting engineers, 133 University Street, Belfast. Tenders by Feb. 10.

***Dunmow, Essex.**—Construction of sewerage and sewage disposal works at Little Hallingbury (contract 17), for R.D.C. Deposit £10 10s. Tenders by March 4.

Ellesmere Port, Ches.—Construction of 354 lin. yd. of 27 in. dia. surface water sewers and 40 lin. yd. of 9 in. dia. foul sewers, in Wellington Road and Grange Road, contract 286, for B.C. Documents from the Borough Engineer and Surveyor, Queen Street, Ellesmere Port. Tenders by Feb. 8.

Fifeshire.—Kincardine drainage scheme, for C.C. Laying approximately 2,000 lin. yd. of 6 in., 9 in., 12 in., 15 in., 21 in. and 24 in. diameter sewers, together with manholes, pumping stations, settlement tank, tidal outfall and other relative works for the village of Kincardine. Applications to the County Engineer, County Offices, Belfield, Cupar, by Jan. 30.

Forehoe and Henstead, Norfolk.—River View, Wrenningham sewerage and sewage disposal, for R.D.C., comprising laying and jointing approx. 163 yd. of 6 in. diameter glazed stoneware sewer pipes, together with drain connections and the construction of seven brick manholes and a sewage disposal works to serve 12 houses. Documents from W. A. Jones, engineer and surveyor, Ber House, 158 Ber Street, Norwich. Deposit £1 1s. Tenders by Feb. 22.

Goole, Yorks.—Laying of 92 yd. of 6 in. dia. concrete pipe sewer in Church Lane, Hook, for R.D.C. Documents from Fairbank and Son, consulting engineers, The Gables, 62a Bootham, York. Deposit £1 1s., payable to R.D.C. Tenders by Feb. 9.

Isle of Ely.—Following, for C.C. Construction of approx. 900 yd. of surface water sewer in High Street and Ely Road, Littleport, ranging from 6 in. to 12 in. diameter, including precast concrete manholes, road gullies and connections. Applications to the County Surveyor, County Hall, March, Cambs. Tenders by Feb. 8.

Midlothian.—Construction of 227 lin. yd. of 9 in. diameter fireclay sewer and ancillary works at Roslin, for C.C. Documents from the County Engineer, 32 Palmerston Place, Edinburgh, 12. Tenders by Feb. 5.

Nottingham.—Construction of outfall sewers in tunnel from the Bestwood Park housing estate, Oxclose Lane, for City Council. Documents from R. M. Finch, city engineer and surveyor, The Guildhall, Nottingham. Deposit £2. Tenders by Feb. 17.

Rochdale, Lancs.—Construction of a storm water overflow at Clifford Street, for B.C. Documents from Borough Surveyor, Town Hall, Rochdale. Tenders by Feb. 2.

Rochford, Essex.—Hullbridge sewerage, second development, Ferry Road area, for R.D.C., comprising construction of about 600 yd. of 6 in. and 9 in. dia. stoneware pipe sewers, with brick manholes, and a similar length of 6 in. dia. rising main in asbestos-cement pressure pipe, also a sewerage pumping station, with reinforced concrete storage sump and pump well and brick superstructure. Documents from the Engineer and Surveyor, Council Offices, Rochford. Deposit £3 3s. Tenders by Feb. 25.

Tamworth, Staffs.—Quarry Hill, Wilnecote, sewerage scheme, for R.D.C., comprising the construction of a sewage ejector station, the laying of approx. 205 lin. yd. of cast-iron pumping main, and approx. 590 lin. yd. 6 in. g.s. foul water sewers, together with incidental works. Documents from A. Shaw, engineer and surveyor, 92 Lichfield Street, Tamworth. Deposit £2 2s. Tenders by Feb. 19.

Tickhill, Yorks.—Erection of three new sludge drying beds at the sewage works at Paper Mill Lane, for U.D.C. Documents from the office of the engineers, J. Haslam and Sons, Ryton Chambers, Newcastle Avenue Workshop, by Feb. 1. Deposit £2 2s., payable to U.D.C.

Ulverston, Lancs.—Sewerage and sewage disposal scheme for the village of Bouth, for R.D.C.: (1) Construction of sewage disposal works, including sedimentation tanks, filters, humus tank, sludge drying beds, etc.; (2) laying approx. 360 lin. yd. of 6 in. dia. glazed earthenware sewer; (3) laying approx. 237 lin. yd. of 9 in. dia. glazed earthenware sewer; (4) laying approx. 16 lin. yd. of 9 in. cast-iron sewer; together with (5) the construction of 12 manholes. Documents from H. Whittaker, engineer and surveyor, 24 Queen Street, Ulverston. Tenders by Feb. 10.

Uppingham, Rutland.—Laying of approximately 167 lin. yd. of 6 in. diameter pipe across the fields at Lyddington and approximately 82 lin. yd. of 4 in. diameter pipe at Church Lane, Preston, for R.D.C. Documents from the Surveyor, Council Offices, Uppingham. Deposit £1 1s. Tenders by Feb. 3.

***Uxbridge, Middx.**—Replacement of the main town soil sewer (contract 430), for B.C. Applications by Feb. 8.

Wick, Caithness.—Construction of a new trunk sewer at Willowbank, consisting of approx. 1,000 lin. yd. of reinforced concrete pipes varying from 12 in. to 27 in. diameter, brick manholes, other ancillary works and an outfall to Wick River, for B.C. Documents from Jenkins and Marr, civil engineers, 3 Bon-Accord Crescent, Aberdeen. Tenders by Feb. 5.

Wilmslow, Ches.—Styal sewerage, contract 8, for U.D.C., comprising construction of approximately two miles of sewers up to 15 in. diameter, together with manholes and appurtenant works. Documents from the engineers, G. B. Kershaw and Kaufman, 82 Victoria Street, Westminster, London, S.W.1. Deposit £5 5s (cheques payable to U.D.C.). Plans also seen at the offices of the Surveyor, Council Offices, Green Hall, Wilmslow. Tenders by Feb. 17.

***Wymondham, Norfolk.**—Extension sewage disposal works, for U.D.C. Apply by Jan. 30. Deposit £5 5s. Tenders by March 1.

STREET LIGHTING

Altrincham, Ches.—Installation of 158 lighting units within the borough, for B.C., comprising the supply, erection, and putting into service of 60-W sodium lamps, lanterns, and gear on 20 ft. concrete columns. Documents from the Borough Surveyor, Town Hall, Altrincham. Deposit £3, payable to Borough Treasurer. Tenders by Feb. 5.

Newcastle upon Tyne.—Modernising and extension of main kitchen at General Hospital, for Regional Hospital Board. M. Catoff, architect, 26 Mosley Street, Newcastle upon Tyne, in conjunction with P. H. Knighton, architect to the Board; Thos. Barrett, Sons and Partners, quantity surveyors, 17 Brunswick Place, Newcastle upon Tyne; H. Kindred (Newcastle). Ltd..

371 West Road, Newcastle upon Tyne, £43,083.

Newmarket, Cambs.—External painting of 432 houses in the various parishes throughout the district, for R.D.C.: S. Hubbard, Burwell, Cambs., £4,841. Work commencing April.

Oxford.—Extension to the existing building to provide additional tutors' rooms, lecture room, offices, common rooms and a car park at 15 Norham Gardens, for The Oxford University Chest. J. Lankester, surveyor to the University; Northcroft, Neighbour and Nicholson, quantity surveyors, Victoria House, Southampton Row, London, W.C.1: Hinkins and Frewen, Ltd., Cranham Street, Oxford.

Conversion of the former sick bay building at Kidlington Rescue Training Centre, for the Civil Defence Committee—Symm and Co., Ltd., 43 Little Clarendon Street, Oxford, £14,453 (recommended, subject to Home Office approval).

Oxford.—Conversion of Denton House, Iffley, into offices for use by Water Department, for City Council: Knowles and Son (Oxford), Ltd., 27 Pembroke Street, Oxford, £14,097 (recommended).

Portsmouth.—Minor alterations and the construction of a playground at Twyford Avenue Day Nursery, North End, for City Council: R. W. Bailey, 399 Copnor Road, Portsmouth, £1,396 (recommended).

Saffron Walden, Essex.—Reconstruction of ward I kitchen at St. James Hospital, for the East Anglian Regional Hospital Board: Direct Labour, £600 (recommended).

Southend, Essex.—Construction of the new police headquarters at Victoria Avenue, for Watch Committee. P. F. Burridge, borough architect: Gray Conoley and Co., 29 Stephenson Street, London, E.16 (subject to Home Office approval). Estimated cost £256,000.

South Shields, Dur.—Factory extensions, Bede estate, for Fry's Diecastings, Ltd. G. H. Gray and Partner, architects, 8 Portland Terrace, Newcastle upon Tyne: Randle and Co., Back Dunelm, Sunderland. Work commenced.

Spennymoor, Dur.—Erection of factory for North-Eastern Trading Estates, Ltd., on behalf of Thorn Electrical Industries, Ltd. Fennell and Baddiley, architects, Bridge End Chambers, Chester-le-Street: Stephenson (Contractors), Ltd., Bishop Auckland.

Stockton-on-Tees, Dur.—Erection of tyre storage depot at Portrack, for Provincial Tyre Co., Grove Street, Stockton: Tarslag, Ltd., Bowfield Lane, Stockton-on-Tees.

Swafton, Norfolk.—Erection of a new county home at Swafton, for Co. Welfare Committee: Horace Mack and Son, Ltd., High Street, Watton, Thetford, £50,729.

Swindon, Wilts.—Erection of a factory (130,000 sq. ft.) at Stratton St. Margaret, for Deloro Stellite, Ltd. Cotton, Ballard and Blow, architects, Cavendish House, Waterloo Street, Birmingham: Higgs and Hill, Ltd., Crown Works, South Lambeth Road, London, S.W.8. Estimated cost £500,000.

Taunton, Som.—Erection of a factory at Priorswood Road, for Steel and Glover, Ltd., Thomas Street, Taunton, Kenneth Steel and Hadley Coleman, architects, 7 The Crescent, Taunton; Venning and Hope, quantity surveyors, 16 The Crescent, Taunton: T. H. Moggridge and Sons, Ltd., 109 East Reach, Taunton, £12,069. Work has commenced.

Todmorden, Yorks.—Adaptation of block I at Fielden Hospital, for the Leeds Regional Hospital Board. Mortimer Partners, architects, Ainderby Hall, Northallerton: H. Baxendale and Son (Builders), Ltd., Shay Lane, Ovenden, Halifax, £4,268. Work just commenced.

Warmley, Glos.—Erection of six shops and maisonnettes at Blackhorse Lane, Mangotsfield, for R.D.C.: John Knox (Bristol), Ltd., Winterstoke Road, Bristol. Estimated cost £26,000. Work about to commence.

Wellingsborough, Northants.—Erection of a supermarket on the site of the Regal Cinema, for the Venture Property and Development Co., Ltd., 3 Buckingham Palace Gardens, London, S.W.1. Plans by staff architects' department and A. G. Crowe, structural engineer, 50 Belgrave Road, London, S.W.1: Ford and Walton, Ltd., Walton House, Warton Road, Stratford, London, E.15.

Wigan, Lancs.—Erection of new ambulance station in Pottery Road, for B.C.: Direct Labour, £20,300.

Wilton, Wilts.—Forming of new kitchens and provision of internal sanitary accommodation at pair of St. John's Almshouses, The Priory, R. Potter and R. Hare, architects, De Vaux House, Salisbury: R. F. Bevis, Ltd., 38-44

Endless Street, Salisbury. Estimated cost £2,225. Work commencing end February.

Winchester, Hants.—Erection of the parish church of St. Luke at Stanmore Lane, for the Stanmore Parochial Church Council. C. W. T. Evans, architect, and A. S. Wilson and Partners, quantity surveyors, both at Wolvesey Palace, College Street: Hampshire Contractors, Ltd., Winnall, Winchester. Estimated cost £30,000. Work commenced.

York.—Provision of visitors' toilets, alterations and extensions to laundry and alterations to form consulting rooms at Naburn Hospital, York, for Leeds Regional Hospital Board. Colin Rowntree and Partners, architects, 120 The Mount York: William Birch and Sons, Ltd., Spen Lane, York, £7,790. Work commencing February.

York.—Extensions to the dining room in female admission ward at Clifton Hospital, for the Leeds Regional Hospital Board. Mortimer Partners, architects, Ainderby Hall, Northallerton: F. Shepherd and Son, Ltd., Blue Bridge Lane, York, £1,833. Work commenced.

DEMOLITION

Kent.—Sub-contract for all the demolition work at Folkestone Central and Shorncliffe Stations, including removal of bridges and platforms, etc, scheme C.600, for the British Transport Commission: Dover Demolition and Erection Co., Ltd., 30 Castle Street, Dover, £5,806.

ELECTRICAL

Keighley, Yorks.—Rewiring of electrical services at Keighley and District Victoria Hospital, for Leeds Regional Hospital Board. R. W. Gregory and Partners, consulting engineers, 1 Brazenose Street, Manchester, 2: Southern and Redfern, Ltd., Woodhead Road, Bradford, 7, £12,979. Work commenced.

Lichfield, Staffs.—Provision and installation of lift in connection with provision of central stores and patients' social centre at St. Matthew's Hospital, Burntwood, for the Birmingham Regional Hospital Board: Evans Lifts, Ltd., 27 George Street Birmingham, 12, £2,560 (recommended).

Newcastle upon Tyne.—Electrical work for additions to Stockton and Thornaby Hospital, for Regional Hospital Board: Cox Walker, Ltd., Darlington, £1,585.

Rochdale, Lancs.—Modernisation of Town Hall lift, for B.C.: Otis Elevator Co., Ltd., 16 Deansgate, Manchester, 3, £3,678 (recommended).

FENCING

Bromsgrove, Worcs.—Renewing chain link fence, and planting privet behind, and repairing concrete and oak posts, single and double gates, etc., on the Churchfields and King George Close estates (380 houses), for U.D.C. E. Stacey, housing manager: T. Curley, 128 Bendall Road, Kingstanding, Birmingham, £1,207.

Eccles, Lancs.—Erection of cleft chestnut fencing, each pale nailed to two rails secured to chestnut stakes, and gate posts at Rydal Avenue and Shackleton Street, for B.C.: Direct Labour, £1,122 and £600, respectively (recommended).

GAS AND WATER SUPPLY

Durham.—Construction of 36in. water mains from Mosswood pumping station to Castle-side service reservoir, for Durham County Water Board. A. C. Wildsmith, chief engineer: Direct Labour, £133,000.

Exeter.—Following works, for City Council: Construction of the reinforced concrete frame for the booster plant house—The Helical Bar and Engineering Co., Ltd., 82 Victoria Street, London, S.W.1, £5,500 (recommended).

Construction of a hard road surface and filling-in of filter bed site at the booster plant house and the laying of a 10in. water main from Magdalen Street to Bonhay Road—Direct Labour (recommended). Estimated cost £3,500 and £6,900, respectively.

Merthyr Tydfil, Glam.—Laying approximately 1½ miles of 18in. and 14in. steel pipes, and ancillary works, from Pen-y-Dryg to Pont Sarn, for the Taf Fechan Water Supply Board, contract 29: Davies, Middleton and Davies, Ltd., Phoenix Works, Caerphilly Road, Cardiff. Estimated cost £16,000 (subject to Ministry approval).

Stokesley, Yorks.—Laying of about 900yd. of 3in. cast-iron main to connect into the 3in. water main in Faceby Road, Carlton, for R.D.C.: Farrods, Ltd., Skellbank, Ripon (recommended).

Totnes, Devon.—Supply and installation of a new pump for Dartington Drive pump

house, for B.C.: Tangyes, Ltd., 60 Grosvenor Street, London, W.1, £1,048 (recommended).

Weyland, Norfolk.—Construction of a water works pumping station and treatment works, together with works incidental thereto, in the parish of Riddlesworth, contract 9, for R.D.C. A. P. I. Cotterell and Son, consulting engineers, 54 Victoria Street, Westminster, London, S.W.1: Vibrated Concrete Construction Co., Ltd., 27 Ashley Place, Westminster London, S.W.1, £27,192.

Whitefield, Lancs.—Laying of approximately 1,100yd. of 12in. diameter spun-iron pipes, together with ancillary work, in Bury Old Road, Whitefield, for Irwell Valley Water Board. R. Wyllie, engineer and manager, Parsons Lane, Bury: James E. Turner, Ltd., Limefield Brow, Walmersley, Bury, £4,031.

HARBOURS, PIERS AND SEA DEFENCE WORKS

Totnes, Devon.—Sheet piling at The Island, for B.C.: A. E. Farr, Ltd., Station Road, Westbury, Wilts., £15,850 (recommended).

HEATING AND VENTILATING

Bury, Lancs.—Heating installation at Woodbank Residential Hostel, Brandleholme Road, for B.C.: Emmett and Smith, 7 Whitworth Street West, Manchester.

Hull.—Following works, for City Council. Andrew Rankine, city architect: Low pressure hot water heating and domestic hot water supply installation, Boothferry Road Secondary Modern School—Humber Heating Co., Ltd., 45 Portland Place, Kingston-upon-Hull.

Central heating installation, Estate Office, Preston Road—E. G. Hill and Co., Ltd., rear 22 Lambert Street, Kingston-upon-Hull.

Rochdale, Lancs.—Domestic hot water installation at Boys' Technical School, for B.C.: J. Cyril Mills and Son, Ltd., Rochdale, £3,673 (recommended).

HOUSING SCHEMES

Antrim.—Following, for R.D.C.: 82 houses at Crumlin and 31 at Roughfort—James Evans and Sons, Ballyscullion Road, Bellaghy, £123,851 and £45,043, respectively; 24 houses at Steeple—Samuel Moore and Co., Gracehill, Ballymena, £56,050.

Aycliffe, Dur.—Fifty-one houses near Pease Way for Aycliffe Development Corporation. G. A. Goldstraw, chief architect: Bell and Ridley, Ltd., North Road, Durham.

Birmingham.—Following works, for Housing Committee. A. G. Sheppard Fidler, city architect: 275 houses and four-storey maisonnettes and 145 garages at Nazareth House estate, Longbridge—Direct Labour, £534,000; 68 flats and maisonnettes and 50 garages at Eachway estate, Rubery—Mackee and Rodway, Ltd., 1 Chatham Road, Birmingham, 1, £149,000.

Brechin, Angus.—Various trades for 44 houses at Bridge Street, for B.C.: Brick, etc.—C. and D. Laird, Forfar, £25,710; joiner—William Black and Son, Ltd., Brechin, £15,202; glazier—J. Thow, Dundee, £1,692; roughcast—Baxter Bros., Montrose; plumber—Pelling and Cromshaw, Arbroath, £3,917; plaster—Laird Bros., £6,113; painter—James Nicoll, Montrose, £1,963; electrical—James Scott, Perth, £9,184; smith—Parker-Rogers, Carnoustie, £1,033.

Bredbury and Romiley, Ches.—Twenty-three one-room flats with common rooms and caretaker's residence, for U.D.C. W. Thorpe and H. Hirst Smith, architects, Barton Arcade, Deansgate, Manchester: Wm. Martin, Kirkly Sawmills, Hyde, Ches., £28,625.

Brentford and Chiswick, Middx.—Following, for B.C.: Conversion of 27 Somerset Road, Brentford—Decor (Richmond), Ltd., 7 Paradise Road, Richmond, £2,879 (accepted); T. Peyton and Sons, Ltd., £3,150; Wm. Lay Co., Ltd., £4,120; S. T. Mace, Ltd., £3,251; E. B. Dobson, £3,225; Geo. Moss and Sons, Ltd., £3,295; G. E. Galpine and Sons, Ltd., £3,690.

Conversion and repair of 51 Duke's Avenue and 146 Sutton Court Road, Chiswick: S. T. Mace, Ltd., 142a Bath Road, Hounslow, and T. Peyton and Sons, Ltd., 326 Garrett Lane, London, S.W.18, £4,225 and £4,415, respectively.

Bristol.—Thirty-two houses at Fair Furlong, Withywood, for City Council: M. J. Joyce, Ltd., St. John's Road, Bristol, 3, £55,862 (recommended).

Chard, Som.—Forty-four dwellings at Jocelyn Park, for B.C. A. L. Lacombe, borough surveyor: G. T. Chubb and Sons, Ltd., Chardstock, Axminster, £63,897.

Chesterfield, Derbys.—Forty-four houses and 18 flats at the new Dunston Hall estate, 1, 1

B.C.: Direct Labour. Estimated cost £77,793.

Chipping Norton, Oxon.—Two-storey unit of four flats at Kingham, for R.D.C. Beecher and Stamford, architects, 14 Park End Street, Oxford; Henry Cooper and Sons, quantity surveyors, Frewin Court, 51a Cornmarket Street, Oxford; Bartlett Bros. (Industrial), Ltd., 75 High Street, Witney, Oxon, £5,277.

Crewe, Ches.—Eighteen bungalows (for sale) at Victoria Street and West Street, for B.C.: John Brown and Sons (Wolverhampton), Ltd., 75 Darlington Street, Wolverhampton, £28,710.

Darlington, Dur.—One hundred and sixty-four houses on the Lingfield estate, for the B.C. E. A. Tornbohm, borough architect; F. Shepherd and Sons, Blue Bridge Lane, York, £245,036.

Essex.—Following works, for the Essex Court of Quarter Sessions and the C.C.: (1) Abridge—single police house and office; (2) Sheering—single house and office; (3) Braintree—one pair houses. H. Conolly, county architect: (1) A. R. Sheppard, Ltd., South Woodford, E.18; (2) J. L. Glasscock's Successors (Bishops Stortford), Ltd., Bishops Stortford; and (3) C. A. Clegg and Co., Braintree. Work about to commence.

Gosforth, Northumb.—Ten houses at Aln Avenue, for U.D.C.: Adam R. Robertson (Builders), Ltd., East Park View, Blyth.

Greenock, Renfrews.—One hundred and eighty-four three- and four-apartment houses at Fancy Farm, for B.C.: Dougall and Co., Ltd., Glasgow Road, Dumbarton. Estimated cost £375,000.

Hambledon, Surrey.—Old people's bungalows on the following sites, for R.D.C.: Hazelwood, Elstead—three pairs, Glebe Road; Cranleigh—single bungalow; Wyphurst Road, Cranleigh—single bungalow—B. G. Merrison Brundall, Churt, Surrey, £9,582; H. J. Titcomb and Sons, Ltd., Milland, Liphook, Hants, £1,505 and £1,962, respectively. Work is expected to start February.

Hull.—Two dwellings, garage, messroom and stores, Princess Elizabeth Playing Fields, Beverley Road, for City Council: Direct Labour.

Lambeth.—Twenty-four flats in a six-storey block and 16 maisonnettes in a four-storey block, together with 42 tenants' stores, four garages, etc., at South Lambeth estate, for L.C.C.: G. Ward (Ealing), Ltd., 119 Hamborough Road, Southall, £94,215 (accepted); Gee, Walker and Slater, Ltd., £97,654; Rowley Bros., Ltd., £99,896; Kirk and Kirk, Ltd., £101,473; Gray, Conoley and Co., Ltd., £102,163; Stewart and Partners, Ltd., £103,047; Speirs, Ltd., £103,301; Rice and Son, Ltd., £104,735; Bridge, Walker, Ltd., £106,395.

Leeds.—Erection of a pair of medical staff houses at Cookridge Hospital, for the Leeds Regional Hospital Board. Kitson, Parish, Ledgard and Pyman, architects, Lloyds Bank Chambers, Vicar Lane, Leeds, 1; J. W. Dufton and Sons Ltd., Oakwell Works, Broad Lane, Bramley, Leeds, £5,683. Work about to commence.

Lewisham.—Twenty-four flats in a six-storey block and 19 houses in two terraces, together with 12 tenants' stores, 14 garages and a play space at Perry Hill site, for L.C.C.: Thomas and Edge, Ltd., 52 Macbean Street, London, S.E.18, £113,314 (accepted); Rowley Bros., Ltd., £114,638; M. Howard (Mitcham), Ltd., £115,939; Tersons, Ltd., £116,617; Gee, Walker and Slater, Ltd., £116,994; Rush and Tompkins, Ltd., £117,784; W. J. Simms, Sons and Cooke, Ltd., £118,404; Halse and Sons, Ltd., £119,443; Carlton Contractors, Ltd., £121,540; Wilson Lovatt and Sons, Ltd., £121,856.

Llanidloes, Monts.—Three-storey block of four old people's flats on the ground floor and six maisonnettes over, and site works, at Brook Street, for B.C. D. Mervyn Edwards and Moreton, architects, 5 Lower Brook Street, Oswestry: D. T. Jones and Co., Powells' Lane, Welshpool, Monts., £16,486 (accepted); Evans and Owen (Builders), Ltd., £17,738; E. J. Higley, Welshpool, Monts., £21,072; Western Plasterers, Ltd., £16,943; Gee, Walker and Slater, Ltd., £18,516.

Lowestoft, Suffolk.—Fifty traditional houses at Guntton estate, for B.C.: W. Ames, Ltd., 20 North River Road, Great Yarmouth, £80,750 (recommended, subject to Ministry approval).

Paddington.—Construction at Maida Vale site of 119 maisonnettes in three six-storey blocks, together with a doctor's surgery, 16 tenants' stores, a garage, parking spaces for 16 cars and four play spaces, for L.C.C.: Rowley Bros., Ltd., Tower Works, Dunloe

Avenue, London, N.17, £297,982 (accepted); Tersons, Ltd., £309,815; M. J. Gleeson (Contractors), Ltd., £310,419; Leslie and Co., Ltd., £310,596; Token Construction Co., Ltd., £317,077; W. J. Simms, Sons and Cooke, Ltd., £322,501; Bernard Sunley and Sons, Ltd., £324,551; Rush and Tompkins, Ltd., £328,172; Kirk and Kirk, Ltd., £337,390; Wates, Ltd., £344,374; Wilson Lovatt and Son, Ltd., £344,532.

Pershore, Worcs.—Nine bungalows at Station Road and one pair of houses at Head Street, for R.D.C.: F. J. Sears, Hillcrest, Kempsey, £12,974 (accepted); John Hall (Pershore), Ltd., £13,177; R. C. Hill, £13,714; A. Pettifer (Pershore), Ltd., £13,990; W. A. Cox (Evesham), Ltd., £14,718.

Poplar.—Following, for L.C.C.: Seventy-five maisonnettes in an 11-storey block, together with 26 tenants' stores, parking spaces for eight cars and a playground at Birchfield estate: W. and C. French, Ltd., Chigwell, Essex, £209,477 (accepted); Rowley Bros., Ltd., £210,628; Thomas and Edge, Ltd., £211,430; Bernard Sunley and Sons, Ltd., £213,143; Leslie and Co., Ltd., £216,670; Y. J. Lovell and Son, Ltd., £216,723; J. M. Hill and Sons, Ltd., £220,894; A. T. Rowley (London), Ltd., £225,264; Rush and Tompkins, Ltd., £227,889; Tersons, Ltd., £239,524.

Design and construction of pile and beam foundations for eight four-storey blocks of maisonnettes and two five-storey blocks of flats at Pier Street site—The Pressure Piling Co. (Parent), Ltd., 637 Old Kent Road, London, S.E.15, £20,830; Soil Mechanics, Ltd., £22,550; The Cementation Co., Ltd., £24,543; Terresearch, Ltd., £27,990.

Fifty-three flats and maisonnettes in a 10-storey block, together with four tenants' stores, five garages, etc., at St. Leonard's Road School site—Thomas McInerney and Sons, Ltd., Watford, Herts., £131,124 (accepted); J. Jarvis and Sons, Ltd., £145,824; Token Construction Co., Ltd., £151,364; Wilson Lovatt and Sons, Ltd., £154,900; J. Gerrard and Sons, Ltd., £154,904; Rowley Bros., Ltd., £155,120; A. T. Rowley (London), Ltd., £157,781; The Demolition and Construction Co., Ltd., £169,824; Leslie and Co., Ltd., £170,818; H. Webb (Builders), Ltd., £171,902.

Ramsey, Hunts.—Six houses at West Avenue, for U.D.C.: A. N. Swearer and Son, Ltd., 12 Blenheim Road, Ramsey, £7,959 (accepted); Avory Bros. and Shepperson, £8,580; W. Tatt, £8,581; L. Peat, £9,203.

St. Paul's Cray, Kent.—Construction on a site at Cotmandene Crescent, St. Paul's Cray estate, of 32 maisonnettes in an eight-storey block, together with 16 garages, for L.C.C.: Croudace, Ltd., Caterham, Surrey, £102,508 (accepted); R. Mansell, Ltd., £103,739; Rush and Tompkins, Ltd., £104,451; Thomas and Edge, Ltd., £104,807; M. J. Gleeson (Contractors), Ltd., £105,974; J. Gerrard and Sons, Ltd., £108,890; Carlton Contractors, Ltd., £111,333; Leslie and Co., Ltd., £112,400; Rowley Bros., Ltd., £113,494; Kirk and Kirk, Ltd., £114,510.

Skelton, Yorks.—Forty-two houses on Marske Lane estate, for U.D.C.: 14 houses—Morrison Bros., East Loftus; 16 houses—F. J. Willis and Son, Hinderwell; and 12 bungalows—C. Hebditch, Loftus.

Southwark.—Following, for L.C.C.: Twenty flats in a five-storey block at Brandon estate—Direct Labour, £57,145.

Design and installation of pile foundations for a 25-storey block of dwellings at Draper Street area of the Elephant and Castle development area—Piling and Construction Co., Ltd., 111 St. James's Road, Croydon, £20,987 (accepted); The Pressure Piling Co. (Parent), Ltd., £21,039; Soil Mechanics, Ltd., £23,000; Terresearch, Ltd., £23,876; John Gill Contractors, Ltd., £33,025.

Southwell, Notts.—Two pairs of bungalows, Easthorpe, for R.D.C. M. England, architect and surveyor: H. B. Mann, Westdale, Carsic Lane, Sutton-in-Ashfield, £5,480.

Stepney.—Following, for L.C.C.: 48 flats in a 5-storey block and 21 maisonnettes in a 6-storey block, together with 6 tenants' stores and 4 garages, at Bigland Street area—H. Webb (Builders), Ltd., Romford, Essex, £165,169 (accepted); Thomas and Edge, Ltd., £169,965; J. M. Hill and Sons, Ltd., £174,658; W. J. Simms, Sons and Cooke, Ltd., £175,657; Rush and Tompkins, Ltd., £176,528; Tersons, Ltd., £177,853; Thomas McInerney and Sons, Ltd., £179,022; William Willett, Ltd., £179,459; Rowley Bros., Ltd., £182,134; W. H. Gaze and Sons, Ltd., £189,963.

Construction on the Mountmorres Road site of 80 flats and maisonnettes in three four-storey blocks, one of which will include four shops, together with 17 tenants' stores and a dryings yard—Kirk and Kirk, Ltd., 287 Upper Richmond Road, London, S.W.15, £166,530 (accepted); Thomas and

Edge, Ltd., £167,652; Tersons, Ltd., £167,658; W. J. Simms, Sons and Cooke, Ltd., £168,722; J. M. Hill and Sons, Ltd., £169,735; Rush and Tompkins, Ltd., £171,099; A. T. Rowley (London), Ltd., £176,323; Bernard Sunley and Sons, Ltd., £176,325; William Old, Ltd., £176,550; H. Webb (Builders), Ltd., £177,171.

Swaffham, Norfolk.—Twenty-two bungalows at Coronation Grove estate, for U.D.C.: O. Staines and Son, Swaffham, £24,056.

Wandsworth.—Following, for L.C.C.: Construction at Alton estate of 40 maisonnettes and five flats in a 10-storey block, together with a car park and 21 tenants' stores—Wates, Ltd., 1258 London Road, London, S.W.16, £193,595 (accepted); Thomas and Edge, Ltd., £195,520; Tersons, Ltd., £195,931; M. J. Gleeson (Contractors), Ltd., £199,744; Unit Construction Co., Ltd., £199,870; Rowley Bros., Ltd., £200,714; Carlton Contractors, Ltd., £203,409; Bernard Sunley and Sons, Ltd., £206,930; W. H. Gaze and Sons, Ltd., £232,544. The architect's comparable estimate is £199,691.

Twenty-four flats and maisonnettes in a three-storey block, together with nine tenants' stores, four garages and parking spaces for four cars at Ashburton estate—G. Ward (Ealing), Ltd., 103 Uxbridge Road, London, W.5, £53,272 (accepted); Token Construction Co., Ltd., £55,135; M. Howard (Mitcham), Ltd., £55,642; Farrans, Ltd., £57,467; Peopie and Partners, Ltd., £59,116; Kirk and Kirk, Ltd., £59,188; Thomas and Edge, Ltd., £60,786; M. J. Gleeson (Contractors), Ltd., £61,253; T. R. Roberts (Builders), Ltd., £61,594; A. T. Rowley (London), Ltd., £64,347.

Twenty-two maisonnettes in two four-storey blocks and nine houses in two terraces, together with 11 tenants' stores and five garages, at Aboyne estate—M. Howard (Mitcham), Ltd., Mitcham, Surrey, £78,970 (accepted); Croudace, Ltd., £80,547; Stewart and Partners, Ltd., £82,463; H. T. Oliver and Sons, Ltd., £84,629; Truett and Steel, Ltd., £84,993; Gray, Conoley and Co., Ltd., £86,909; Marshall, Andrew and Co., Ltd., £87,112; W. H. Gaze and Sons, Ltd., £88,763.

Forty-eight flats and maisonnettes in two blocks, four and six storeys in height, and five houses in a terrace, together with 21 garages and a playground, at Thornton Gardens estate—W. J. Simms, Sons and Cooke, Ltd., Beddington Lane, Croydon, £134,567 (accepted); William Willett, Ltd., £135,284; Gee, Walker and Slater, Ltd., £137,482; M. Howard (Mitcham), Ltd., £138,255; Token Construction Co., Ltd., £139,930; J. M. Hill and Sons, Ltd., £143,782; Rowley Bros., Ltd., £144,536; Carlton Contractors, Ltd., £146,612; Thomas and Edge, Ltd., £146,639; M. J. Gleeson (Contractors), Ltd., £146,918.

Woolwich.—Ten flats in a five-storey block and nine tenants' stores at Milne estate, for L.C.C.: Charles R. Price, Wembley, Middx., £28,357 (accepted); Haymills (Contractors), Ltd., £28,940; Thomas and Edge, Ltd., £29,290; Y. J. Lovell and Son, Ltd., £29,685; The Demolition and Construction Co., Ltd., £29,970; R. Mansell, Ltd., £30,410; J. M. Hill and Sons, Ltd., £30,478; Rush and Tompkins, Ltd., £32,160. The comparable estimate of the architects, Adie. Button and Partners, is £27,458.

Yeovil, Som.—Seventeen old people's bungalows and five houses at Sunningdale estate (scheme B/4), for B.C.: R. Shillabeer and Sons, Stars Lane, Yeovil, £36,998 (recommended, subject to Ministry approval).

York.—Following, for City Council: (a) Block of 22 flats at Fourth Avenue; (b) self-service shop with four flats over at Chapel Fields estate. E. Firth, city architect, 7 St. Leonard's Place: (a) D. Hughes, Dennison Street, Huntington Road, York, £26,919; (b) The Danum Construction Co., 219 Bentley Road, Doncaster, £17,324.

MATERIALS AND SUPPLIES

Ashton-under-Lyne, Lancs.—Supply of 1,000 dustbins, for B.C.: S. Sims and Sons, Ltd., Chesterfield.

Lowestoft, Suffolk.—Provision of four precast concrete shelters on the South Pier, each 77ft. by 10ft. 4in., for B.C. Blakely (Sheffield), Ltd., (recommended).

PLANT AND MECHANICAL TRANSPORT

Ashton-under-Lyne, Lancs.—Supply of a Morris Commercial three-ton vehicle with diesel engine and forward control chassis, for B.C.: Stamford Motors, Ltd., Old Street, Ashton, £1,127 (recommended).

Coalville, Leics.—Supply of a mechanical loading shovel, for U.D.C. R. H. Smith, engineer and surveyor: The Bray Construction Equipment, Ltd., Feltham, Middx., £2,412.

Liskeard, Corn.—Supply of a 5cwt. pick-up vehicle, for R.D.C.: Taylors Motors (Liskeard), Ltd., Parade, Liskeard, Cornwall, £484.

Northwich, Ches.—Supply of a Dennis gully/cesspool emptying machine of 600 gallons capacity, contract 450, for U.D.C.: Old Trafford Motor Engineering Co., Ltd., Talbot Road, Manchester, 16.

PLAYING FIELDS, PARKS, ETC.

Lowestoft, Suffolk.—Preparation of a site at rear of Montgomery Avenue, Gunton estate, as a playing field, for B.C.: E. Doe and Sons (Contracts), Ltd., Fyfield, Ongar, Essex, £3,057 (recommended).

Maesteg, Glam.—Excavation and levelling of approximately 30,500 cu. yd. in preparation for a proposed playing field at the South Parade site, for U.D.C.: Lewis W. Jones, engineer: Sam Booth, Ltd., Perry Mount Chambers, Haywards Heath, Sussex, £1,500.

Reigate, Surrey.—Construction of a bowling green at Battlebridge recreation ground, Merstham, for B.C.: Maxwell M. Hart (London), Ltd., Winnersh, Wokingham, Berks.

RAILWAY ENGINEERING

British Railways.—Following contracts placed: Eastern Region:

Reconstruction of portion of superstructure of underline bridge 11 carrying the up main, down main and up neck lines over River Doe Lea between Staveley Town (closed) and Clowne and Barlborough—Braithwaite and Co. Structural, Ltd., The Moorings, Church Road, Great Bookham, Surrey.

Supply and installation of complete train describer system between Hackney Downs, Seven Sisters, Enfield Town and Chingford—Ericsson Telephones, Ltd., 22 Lincoln's Inn Fields, London, W.C.2.

Reconstruction of Swaithe overbridge 65 over main lines, between Wombwell (West) and Barnsley (Courthouse)—Samuel Butler and Co., Ltd., Albion Works, Stanningley, near Leeds.

Supply and erection of electric lighting and power installation at Southbury, Turkey Street and Theobalds Grove Stations—George E. Taylor and Co. (London), Ltd., 34 Southwark Bridge Road, London, S.E.1.

Provision of standby power house at Upminster—Pitchers, Ltd., 57 Ashburton Grove, Holloway, N.7.

Alterations to existing signal box and construction of new relay room at Upminster East—Pitchers, Ltd., 57 Ashburton Grove, Holloway, N.7.

Part demolition of bridge 207 and adjacent buildings, the construction of new abutments, wing walls and welded girder bridge and the resiting of the down side parcels lift shaft on new foundations at Colchester Station—W. and C. French, Ltd., Buckhurst Hill, Essex.

North Eastern Region:

Provision of steel moulds for precast concrete units at the Chief Civil Engineer's Central Concrete Depot, York—T. B. Pearson, Newcastle.

Provision of M.V. cables and switchgear for the East Coast Main Line resignalling scheme at Tweedmouth—Enfield Cables, Enfield.

Extension to the Newcastle signalling scheme—Westinghouse Brake and Signal Co., Ltd., London, W.1.

Provision of a Tup testing machine for Dinsdale Welding Depot—Edgar Allen and Co., Ltd., Sheffield, 9.

Provision of a steel-framed new forwarding shed at Bradford Valley Goods Depot—Fleming Bros., Glasgow.

Provision of a 1,200lb. eight-person passenger lift at Holgate Villa Offices, York—Keighley Lifts, Ltd., Keighley.

Provision of the electric light and power installation at the new office block, Hull Hull English Street—F. E. Wheeler and Co., Ltd., Scunthorpe.

Part demolition and alterations to No. 3 signal box, Newcastle Central Station—Richard Costain, Ltd., Newcastle.

Provision of the electric light and power installation at Bradford Hammerton Street Motive Power Depot—Raines (H. and V.), Co., Ltd., Manchester.

Installation of electric lighting at Northallerton Low Gates Goods Depot—James Scott and Co., Newcastle.

Treatment of Leeds Marsh Lane Grain Warehouse roof by Turnerised process—Turnerised Roofing Co., Saunders Street, London, S.E.11.

Supply and install two storage tanks, pipe-work and components at Manningham Motive Power Depot—Raine (H. and V.), Ltd., Wakefield.

Surfacing the roadway on bridge 11 at Carcroft (Leeds-Doncaster main line)—Pavior Construction Co., Ltd., Shipley.

Erection of a single-storey toilet block in the north siding at Leeds City Station—F. and J. Watkinson, Bradford.

Removal of bridge superstructure and demolition of viaducts on the abandoned Whitby-Lofus line—T. W. Ward, Ltd., Sheffield.

Reconstruction of the roadway adjacent to B shed at Bradford Adolphus Street

Goods Depot—Brighthouse Estate Co. (Builders), Ltd., Bradford, 2.

Supply and erection of steelwork at Smithy Lane Bridge, Lamesley New Marshalling Yard—Wright Anderson and Co., Ltd., Gateshead.

Erection of post and paling fencing on railway property adjacent to the main Middlesbrough to Stockton road—A Robinson, Ltd., Middlesbrough.

Provision of two 10-ton diesel electric rail cranes for the Chief Civil Engineer's Department—Steels Engineering, Manchester.

Supply of electrical equipment for Pelaw signal box, and electrical equipment for the East Coast main line resignalling scheme at Alnmouth and Tweedmouth—Petlow, Ltd., Sandwich.

Supply of air compressors for the new signal box at Tweedmouth—Worthington-Simpson, Leeds.

Unloading and spreading of filling material at Lamesley New Marshalling Yard—R. Costain, Newcastle.

Supply of a new eight-ton fork lift truck for Hull Neptune Street Goods Warehouse—Shelvoke and Drewery, Letchworth.

Demolition work in connection with the abandonment of 4 and 5 bays at Greensfield Motive Power Depot, Gateshead—A. Tremble, Benton, Newcastle.

Conversion of part of the locomotive shed to a repair shed at Greensfield Motive Power Depot, Gateshead—R. Costain, Newcastle.

Provision of one 1,500lb. 10-person passenger lift at the New Traffic Manager's Offices at Newcastle—Etchells, Congdon and Muir, Ltd., Manchester, 4.

Installation of a hot water system and associated builders' work in the offices in the Old Station at York—W. E. Hargrave, York.

Installation of a heating and hot water system in offices at Leeds City Station—H. Morfitt and Sons, Ltd., Leeds, 6.

Supply and install a control Console and associated equipment for the new power signal box at Gateshead—Westinghouse Brake and Signal Co., Ltd., London.

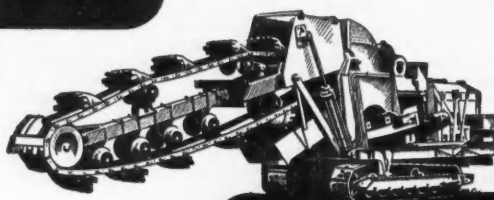
ROADS, BRIDGES AND SITE WORKS

Baildon, Yorks.—Making-up of Hallfield Drive, for U.D.C.: Ibmac, Ltd., Sunbridge Road, Bradford.

Berkshire.—Improvement works on the A.308/A.328 junction, Old Windsor, for C.C., comprising the construction, widening and realignment of about 620yd. of existing carriageway and the construction of 250yd. of new carriageway, with foot-

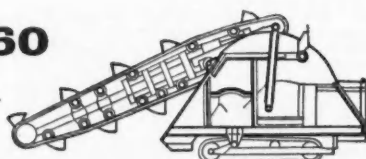
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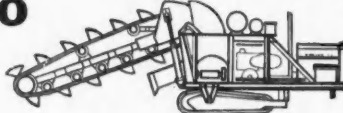
16-60

16in. to 60in.
wide.
14ft. max.
depth.



14-30

14in. to 30in.
wide.
8ft. 6in. max.
depth.



12-21

12in. to 21in.
wide.
6ft. max. depth.



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way, surface water drainage accommodation, and ancillary works: S. Green and Sons (Contractors), Ltd., Highlands Farm, Henley-on-Thames, Oxon.

Biggleswade, Beds.—Construction of roads, sewers, and water mains for site 4 on the Mead End extension, for U.D.C.: S. Green and Son, Henley, £11,323 (subject to Ministry approval).

Bradford, Yorks.—Siteworks on section D of the Allerton housing estate, for City Council: Direct Labour, £107,221.

Brandon, Dur.—Levelling of the Littleburn industrial site and the provision of ancillary services, for U.D.C.: Shellabear Price, Ltd., 6 Queen Anne's Gate, London, S.W.1, £18,928 (recommended).

Bredbury and Romiley, Ches.—Making-up, paving and surfacing of Bankfield Road, Woodley, approximately 260yd. in length, for U.D.C.: T. P. Hodgkinson, engineer and surveyor: Apex Asphaltes, Ltd., Owen Street, Chestergate, Stockport, £2,799.

Brentford and Chiswick, Middx.—Following works, for B.C.: Construction of roads and sewers, Boston Park Road, Brentford—Willment Bros., Ltd., London Road, Isleworth, £2,063; resurfacing of forecourts at Alexandra Gardens, Chiswick—Waywarden, Ltd., 215 Forest Road, Walthamstow, £2,127; surfacing and drainage of the children's playground at St. Thomas' estate, Chiswick—Tar-Roads, Ltd., 21/22 Old Bailey, London, E.C.4, £813.

Camelford, Corn.—(a) Levelling hardcore drainage works, gates, fencing and kerbing; (b) tarmacadam surfacing in the Church Field Car Park, for R.D.C.: R. R. Haylett, surveyor: Sydney Jewell, Fair Park Road, Wadebridge, (a) £516, (b) £952 (accepted); A. E. Farr, Ltd., (a) £850, (b) £1,477; W. J. Glossop, Ltd., (a) £780, (b) £900.

Castleford, Yorks.—Construction of Love Lane housing estate site works, for B.C.: Falon (Civil Engineering and Plant Hire), Ltd., Suspension Bridge Works, South Accommodation Road, Leeds, 9, £65,748 (subject to Ministry approval).

Hambledon, Surrey.—Extension of site development works, Barnett Close, Womersley (contract 2), for R.D.C.: R. F. Caple, engineer and surveyor: Watts Bros. Co., Ltd., Moulsham Copse Lane, Yateley, near Camberley, £3,010 (accepted); Surrey Bituminous Supplies, Ltd., Littleton Lane, Shepperton, Middx., £3,507; Franks Harris Bros., Ltd., Station Approach, Guildford, £3,441; Austen Shives, Ltd., Orestan Lane, Effingham, Surrey, £3,280.

Hammersmith.—Construction of a viaduct at Hammersmith Broadway as part of the Cromwell Road extension, for L.C.C.: Marples, Ridgway and Partners, Ltd.,

2 Lygon Place, London, S.W.1, £912,560 (accepted); W. and C. French, Ltd., £976,523; Richard Costain, Ltd., £985,900; John Mowlem and Co., Ltd., £989,135; James Miller and Partners, Ltd., £1,008,974; Taylor Woodrow Construction, Ltd., £1,024,457; Peter Lind and Co., Ltd., £1,030,580; The Demolition and Construction Co., Ltd., £1,035,405; Holland & Hannen and Cubitts (Great Britain), Ltd., £1,041,996. The appointed engineers' comparable estimate is £1,209,000.

Hampshire.—Construction of approximately one mile of second carriageway alongside the existing trunk road, A.30, eastwards from Hatch (approximately 2½ miles east of Basingstoke), for C.C. H. N. Jenner, county surveyor: Surface Maintenance Services, Ltd., Durham House, 124 Old Christchurch Road, Bournemouth, £42,905. Work commenced.

Hatfield, Herts.—Following, for Development Corporation: (a) Construction of roads and sewers at Ridgeway and Hems Lane, Welwyn Garden City, and (b) construction of car park at Church Road and pedestrian way at Wigmore South—Frain Bros. (London), Ltd., 27 Greenway Gardens, Colindale, London, N.W.9, (a) £32,077 and (b) £6,331. Work about to commence.

Heston and Isleworth, Middx.—Following resurfacing works, for B.C.: Spring Grove Road between Gresham Road and Thornbury Road, and Twickenham Road between South Street and Worton Road—Constable Hart and Co., Ltd., Lion House, Red Lion Street, Richmond, Surrey, £4,969 and £4,442, respectively.

High Wycombe, Bucks.—Private street works at Highfield Avenue, for B.C.: James and Co., Ltd., Slough, £11,156 (recommended).

Lowestoft, Suffolk.—Making-up a section of Clover Way between Gunton St. Peter's Avenue and Squires Walk, for B.C.: Harpers Transport, Ltd., Colville Road Works, Oulton Broad, £3,983.

Mitcham, Surrey.—Bridge and river improvements, contract 3, Phipps Bridge redevelopment scheme, for B.C.: J. E. Billings and Co., Ltd., 54 Beddington Lane, Croydon, £28,320 (recommended); Mears Bros. (Contractors), Ltd., £28,498; W. and J. Glossop, Ltd., £30,282; J. L. Eve Construction Co., Ltd., £31,199; Holland & Hannen and Cubitts (Great Britain), Ltd., £31,657.

Southwark.—Roadworks in connection with stage two of the Elephant and Castle improvement, for L.C.C.: Mowlem (Civil Engineering), Ltd., 91 Ebury Bridge Road, London, S.W.1, £107,688 (accepted); J. Murphy and Sons, Ltd., £110,802; Fitzpatrick and Son (Contractors), Ltd., £121,993; Willment Bros., Ltd., £123,079; Arnold and Nathan, Ltd., £129,690. The

chief engineer's comparable estimate is £120,000.

Spellbrook, Herts.—Widening and reconstruction of bridge over Spell Brook on trunk road A.11, for C.C.: Farmiloe and McVie, Ltd., 10 High Street, Welwyn, Herts.

Sunbury-on-Thames, Middx.—Construction of "bellmouth" entrance to housing site at Montford Road, for U.D.C. comprising surfacing 18ft. carriageway with 1½ in. gravel asphalt, construction of 5ft. 6 in. wide a.s. footways and concrete garage crossings, preparation and seeding of grassed areas: M. Mansell and Sons, 203 Bilton Road, Greenford, Middx., £4,204. Work to commence February.

Warwickshire.—Widening the existing carriageway of the trunk road, A.5, to 33ft. from Merevale Lodges, Atherstone, for a distance of approximately half a mile towards the north-west and constructing an additional 24ft. carriageway for the next quarter-mile approximately to the Isolation Hospital, for C.C. D. Watson, county surveyor: Tarmac Civil Engineering, Ltd., Ettingshall, Wolverhampton. Work commencing shortly.

Wellingborough, Northants.—Queensway estate extension 1, for U.D.C., comprising the excavation and laying of approximately 2,500 lin. yd. of concrete kerb, 7,000 sq. yd. of pre-mixed waterbound macadam and tarmac carriageway, 6 in. to 1½ in. foul and surface water sewers and brick manholes. R. Kilby, engineer and surveyor: F. and R. Windsor, Rushden, Northants, £33,084.

Wellingborough, Northants.—Kerb and footpath improvements in Knox Road and Victoria Road, for U.D.C.: Drybrook Quarries, Ltd., 106 Gold Street, Wellingborough, £1,729.

York.—Construction of road works and car park areas at Bootham Park Hospital, for the Leeds Regional Hospital Board: W. and J. Glossop, Ltd., 1 St. George's Place, York, £3,561. Work commenced.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Bradfield, Berks.—Extension of the Upper Common sewage disposal system, Bucklebury, for R.D.C.: R. J. Free and Sons, Ltd., 27 Northbrook Street, Newbury, £2,197.

Bredbury and Romiley, Ches.—Ashton Road sewerage, for U.D.C., comprising the construction of about 2,450yd. of 9 in. and 6 in. stoneware pipe sewers, manholes, ventilators, etc., and about 1,050yd. of 5 in. spun-iron pumping main, sewage pumping station, and other appurtenant works. D. Balfour and Sons, consulting engineers, 131 Victoria Street, Westminster, London, S.W.1: Cubar Construction Co., Ltd., Clarence Street, Manchester, 2, £27,862.

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Caterham and Warlingham, Surrey.—Laying of approximately 370yd. of 30in. diameter porous concrete pipe, the construction of five manholes and subsidiary works at the Fosterdown Tip, Godstone Hill, Caterham, for U.D.C. L. V. Gordon, engineer and surveyor; P. Lavelle, Ltd., 22 Leppoc Road, London, S.W.4, £2,031 (accepted); Henry Hemmings, Ltd., £3,452; Meres Bros. (Contractors), Ltd., £2,391; Austen Shives, Ltd., £2,535.

Eccles, Lancs.—Supply of penstocks, floating arms and sluice valves for filter beds and tanks at sewage disposal works, for B.C.: Ames Crosta Mills, Ltd., Heywood, £1,535 (recommended).

Elham, Kent.—Construction of approximately 7½ miles of 9in. and 6in. sewers, house connections thereto, two miles of 6in. and 4in. rising mains, three pumping stations, and other works incidental thereto in the parishes of Hawkinge, Swingfield and Acrise, for R.D.C. A. P. I. Cotterell and Son, consulting engineers, 54 Victoria Street, Westminster, London, S.W.1: Bowzell, Ltd., Wellington House, Walmer, £103,797 (accepted, subject to Ministry approval); Minto and Co., Ltd., £104,460; Hugh Brown (Eng.), Ltd., £106,073; Bensted (Contractors), Ltd., £108,651; Richard Costain, Ltd., £115,268; C. Jenner and Son, Ltd., £117,500; T.H. Contractors, Ltd., £118,739; C. V. Buchan, Ltd., £119,010; Mears Bros. (Contractors), Ltd., £124,812. Work commencing April 1.

Exeter.—Following works, for City Council: Extensions to foul and surface water sewers at Redhills—Devon Contractors, Ltd., Venny Bridge, Whipton, Exeter, £2,920; surface water sewerage scheme for the Broadway area, St. Thomas—W. and J. Glossop, Ltd., Exhibition Way, Pinhoe, Exeter, £13,990 (recommended).

Lexden and Winstree, Essex.—Eight Ash Green sewerage and sewage disposal scheme, section 4, for R.D.C., comprising the construction of approximately 2,500yd. of 6in. diameter concrete and glazed stoneware pipe sewers, 1,400yd. of 4in. diameter asbestos-cement rising main, together with manholes, pumping station and other appurtenant works. Elliott and Brown, consulting engineers, Stanley House, Pelham Road, Not-

tingham: J. Moss and Son, Ltd., St. Helena Road, Colchester, £25,274 (subject to Ministry approval).

Llandeilo, Carm.—Construction of Pen-y-groes, Blaenau and Gate Road sewerage and sewage disposal scheme, for R.D.C. Norman E. Evans, engineer and surveyor; Rees Thomas and Co., Ltd., Cwmlynnfell, Swansea, £78,173. Work to commence Feb. 1.

Melton and Belvoir, Leics.—Wymondham sewerage and sewage disposal, for R.D.C., comprising the laying of approximately 5,500yd. of 9in. and 6in. diameter sewers, together with the construction of a sewage disposal works, a pumping station at Edmonthorpe and ancillary work. Pick, Everard, Keay and Gimson, consulting engineers, 6 Millstone Lane, Leicester: D. T. Bullock and Co., Aldridge, Staffs., £49,485 (accepted); Hadsphaltic Construction Co., Ltd., £53,507; Richardson and Cooney, Ltd., £54,950; Stamford Construction, Ltd., £56,664; Thomas Fletcher and Co., £56,932; Bradshaw Bros. (Contractors), Ltd., £60,860. Work commencing March.

Pershore, Worcs.—Construction of the Bishampton sewerage and sewage disposal scheme, for R.D.C.: C. Bryant and Sons, Ltd., Birmingham, £20,727 (accepted); Asphalt and Public Works, Ltd., £21,317; Hadsphaltic Construction Co., £21,452; Worcester Plant Hire and Contractors, £22,053; Gavaghan and McAlpine Co., £22,503; Foxlee Contractors, Ltd., £22,695; Martin Payton and Co., Ltd., £24,217; Flanagan Contractors, Ltd., £24,674.

Stourbridge, Worcs.—Laying of a 45in. diameter concrete culvert at Shepherds Brook, for B.C.: Hawkins Bros., Lower Gornal, near Dudley, £3,932 (recommended, subject to Ministry approval).

STREET LIGHTING

Frome, Som.—Street lighting modernisation, stage II, for U.D.C., comprising group A—supply and erection of 122 Stanton prestressed concrete columns or bracket arms, together with 140-W sodium lamps and lanterns; group B—supply and erection of 96 Stanton prestressed concrete columns or

bracket arms, together with 60-W sodium lamps or lanterns. C. G. P. Lewis, engineer and surveyor; Atlas Lighting, Ltd., A. £4,677; and B, £2,286, respectively.

Malmesbury, Wilts.—Installation of electric street lighting scheme, for B.C.: Southern Electricity Board. Estimated cost £5,752.

Mitcham, Surrey.—Street lighting improvement scheme, stage XVa, for B.C.: Machinery Installations, Ltd., 39 Corporation Street, Birmingham, 2, £9,603 (accepted); H. Smyth, £9,443; Bagshaws Contractors, Ltd., £9,727; O. C. Summers, Ltd., £9,736; Concrete Utilities, Ltd., £9,768; Erecon, Ltd., £9,802; A.E.I. Lamp and Lighting Co., Ltd., £9,837; Cohen Bros. (Electrical), Ltd., £9,954; S. A. Inston and Co., £9,992; Revo Electric Co., Ltd., £10,285; Harland and Wolff, Ltd., £10,382; Pengam Engineering, Ltd., £10,443; Abacus Engineering, Ltd., £10,444; East Construction Co., £10,574; N. Fleming, Ltd., £10,903; G.E.C., Ltd., £11,150.

GOVERNMENT CONTRACTS

Admiralty.—Particulars of contracts over £1,000 in value placed by Civil Engineer-in-Chief's Department:

Kent: reinstatement of road and rail areas—Bensted Contractors, Ltd., Maidstone.

Warwickshire: glazing and resheeting—H. Clarke and Sons, Ltd., Coventry.

Cornwall: workshop erection—Noye Bros., Helston.

Air Ministry.—Contracts to the value of £500 or over for the week ended Jan. 15:

Building work: Marham, Norfolk—Walter Lawrence and Son, Ltd., Ventnor House, London Street, Swaffham, Norfolk; Lyneham, Wilts.—A. J. Dunning and Sons (Weyhill), Ltd., Weyhill, Andover, Hants; London Airport, Middx.—Robert Watson and Co. (Constructional Engineers), Ltd., High Street, Bolton, Lancs.; Coltishall, Norwich, Norfolk—R. G. Carter, Ltd., Drayton, Norwich, Norfolk; Manston, Kent—C. Jenner and Son, Ltd., 5-9 Bouverie Road East, Fokestone, Kent.



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Metropolitan Police.—Recent contracts placed include:

Internal redecorations, Uxbridge Police Station—Venn Bros. (Contractors), Ltd., £685.

Internal redecorations, Ilford Police Station—Stoneley and Co., Ltd., £934.

Ministry of Finance, Northern Ireland.—Contracts exceeding £250 in value placed during the period Jan. 4 to Jan. 15 inclusive:

Supply, etc., 500 small chairs: M/Finance Stores, 18/24 Tomb Street, Belfast, 1—Lees, Hyman and Lees, Ltd., 44 Corporation Street, Belfast, 1.

Supply, etc., nissen hut: U.S.C. Drill Hall, Irvinestown—J. Thorn and Sons, Ltd., Brampton Road, Bexley Heath, Kent.

Supply, etc., "walk-in" type coldroom: H.M. Prison, Crumlin Road, Belfast, 14—J. O. Leech, Ltd., 104 Victoria Street, Belfast, 1.

External and internal painting: Radio Station, Gilnahirk, Knock, Belfast, 5—McBurney and Cowan, 144 Donegall Pass, Belfast, 7.

Alterations and extensions: I.G.'s Headquarters, Brooklyn, Knock, Belfast, 5—Stewart and Partners, Ltd., 1/11 Elgin Street, Ormeau Road, Belfast, 7.

Internal painting and cleaning: Telephone Exchange, Coleraine—H. Platt, 33 Taylor's Row, Coleraine.

Electrical installation: I.G.'s Headquarters, Brooklyn, Knock, Belfast, 5—Adair and Milliken, 1 Parkside Gardens, Belfast, 15.

Low pressure hot water heating, etc.: Petty Sessions Courts, Chichester Street, Belfast, 1—Musgrave and Co., Ltd., St. Ann's Works, Belfast, 5.

Low pressure hot water heating, etc.: New Office Building, Armagh—Musgrave and Co., Ltd., St. Ann's Works, Belfast, 5.

External and internal painting of 16 cottages: Derrynoyd Forestry Centre, Co. Londonderry—W. Evans and Sons, Castle Street, Bellaghy, Co. Londonderry.

Ministry of Works.—Contracts placed for week ended Jan. 9:

Ayrshire: Post Office Motor Transport arage and Workshop, Langlands Street, Kilmarnock—erection—M. Muir and Co., Ltd., 6 Bank Street, Kilmarnock.

Hampshire: Branch Post Office, Buckland, Portsmouth—erection—Frank J. Privett, Ltd., Privett House, Copnor Road, Portsmouth.

Kent: Automatic Telephone Exchange, Sevenoaks—extension—Hebert Richardson and Son, Ltd., Slades Green, Erith.

Lanarkshire: Telephone Exchange, Cambslang—erection—Atholl Houses, Ltd., 29 Park Circus, Glasgow, C.3.

Lancashire: Head Post Office, Market Street, Preston—external painting and internal decoration—F. Parkinson, Ltd., Mowbray Drive, Blackpool; Premium Savings Bond Office, St. Annes-on-Sea—internal and external painting—Arthur Pugh and Co., Ltd., 236 Bolton Road, Salford; repairs to French windows, gutters, etc.—R. Fielding and Son (Builders), Ltd., Stanhope Road, Blackpool.

London: Royal Naval College, Greenwich—adaptation of old building—Walker Clinging and Co., 16 Perry Hill, S.E.6; Branch Post Office, Threadneedle Street, E.C.2—internal decorations—Boyce Building Contractors and Civil Engineers, 110-110a Small Wood Road, Tooting, S.W.17; Department of Scientific and Industrial Research, Cornwall House, S.E.1—modifications—J. Sykes and Son (Heating) Engineers, Ltd., Progress Works, Wellington Crescent New Malden, Surrey.

Norfolk: Post Office Radio Station, Tacolneston, Norwich—erection—Bush Builders (Norwich), Ltd., Mile Cross Lane, Norwich.

Northumberland: Post Office Engineering Section, Government Training Centre, Felling—adaptation—A. Reynolds and Co., 8 Cottenham Street, Newcastle upon Tyne.

Renfrewshire: Post Office Engineering Depot, Clark Street, Paisley—erection—John Crawford and Sons, Ltd., 14 Woodside Terrace, Glasgow, C.3.

Surrey Ordnance Survey Office, Chessington—internal decorations—Spraycraft Co., Ltd., 61 Widmore Road, Bromley, Kent.

Sussex: Telephone Exchange, Rustington—erection—William Willett, Ltd., 12 Grand Avenue, Hove, 3; Head Post Office, East-

bourne—modernisation—J. G. Robinson and Sons, Ltd., 6 Cornfield Terrace, Eastbourne.

Warwickshire: Post Office, Hall Street, Birmingham—reconstruction—James Miller and Partners, Ltd., Spring Vale, Edgbaston, Birmingham, 11; Post Office Supplies Depot, Fordrough Lane, Birmingham—concrete hardstanding—J. J. Gallagher, Ltd., 28-36 Lea Road, Birmingham, 11.

Yorkshire: Ministry of Pensions and National Insurance, The Rectory, Church Lane, Dinnington—heating installation and gas services—William Blagg and Sons, 3 Albert Road, Retford, Notts.

Post Office.—Contracts for duct laying, etc., works to the value of £500 and over placed during the week ended Jan. 16:

J. E. Billings and Co., Ltd., 54 Beddington Lane, Croydon, Surrey; P. J. Byrnes, 168 St. Michaels Hill, Cotham, Bristol, 2;

Christie and Co. (Contractors), Ltd., Raemoir Road, Banchory, Kincardineshire;

James Cooper (Construction), Ltd., 28 Kensington Church Street, London, W.8; R. Costain and Sons (Liverpool), Ltd., Barlow Lane, Fazakerley, Liverpool, 5;

Crawford and Cryan, Ltd., 124 Stafford Road, Wallington, Surrey; B. G. Faherty, Ltd., Orchard House, Millwood End, Longhandborough, Oxford; W. and C. French, Ltd., 50 Epping New Road, Buckhurst Hill, Essex;

Henry Hemmings, Ltd., 129 Brigstock Road, Thornton Heath, Surrey; Longson and Darnley, Ltd., Mersey Street, Portwood, Stockport, Ches.; P. Lowery and Sons, Ltd., Sussex Road, Southall, Middx.; Sir Robert McAlpine and Sons, Ltd., 80 Park Lane, London, W.1; McNicholas Construction Co., Ltd., 31a Cricklewood Broadway, London, N.W.2; J. Murphy and Sons, Ltd., 43 Charteris Road, Finsbury Park, London, N.4; The North Midland Construction Co., Ltd., Portland Works, Daybrook, Nottingham; The Norwest Construction Co., Ltd., Litherland, Liverpool, 21; Sir Lindsay Parkinson and Co., Ltd., 6 Lambeth Road, St. Georges Circus, London, S.E.1; William Pollitt and Co., Ltd., Pool Street, Bolton, Lancs.; Douglas Shields, Ltd., 1 Carlin Gate, Blackpool, N.S. Lancs.; D. J. Sullivan (Bristol), Ltd., 16 Burlington Road, Redland, Bristol, 6; P. W. Wilkins and Son, Ltd., Brunswick Square, Torquay, South Devon.



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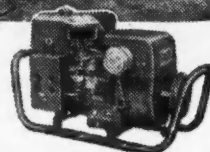
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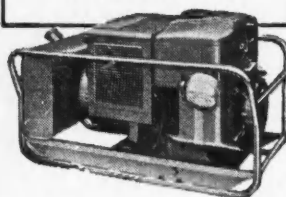
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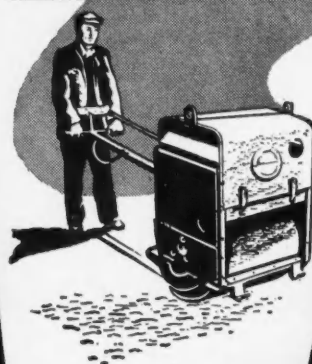
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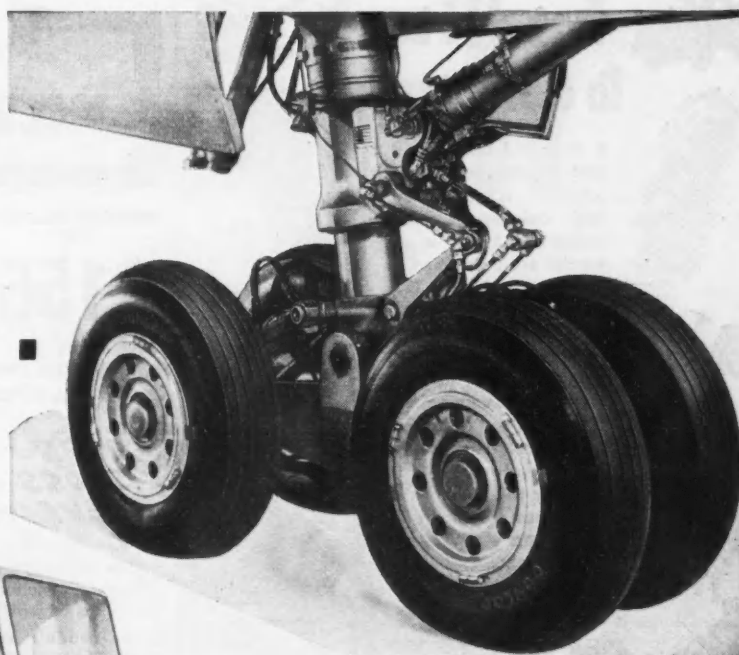
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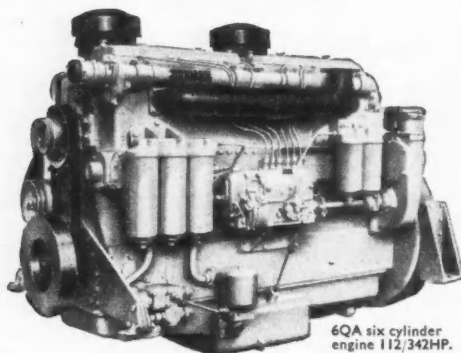
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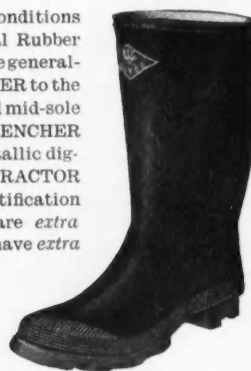
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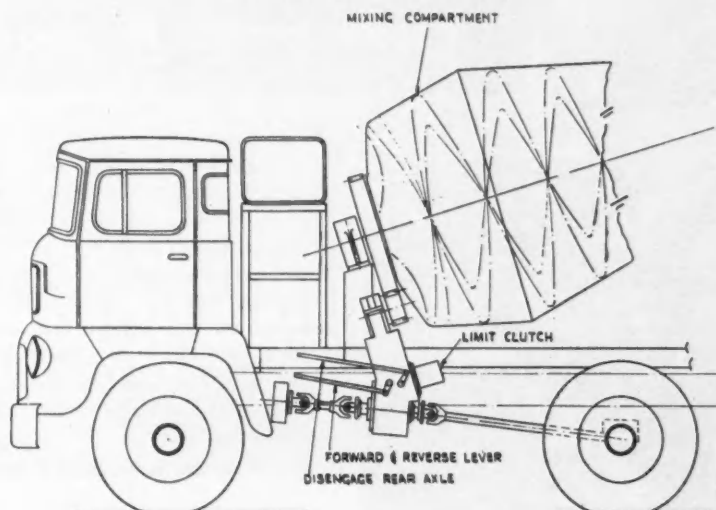
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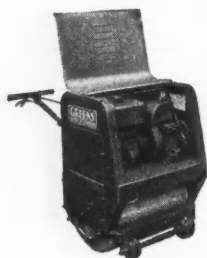
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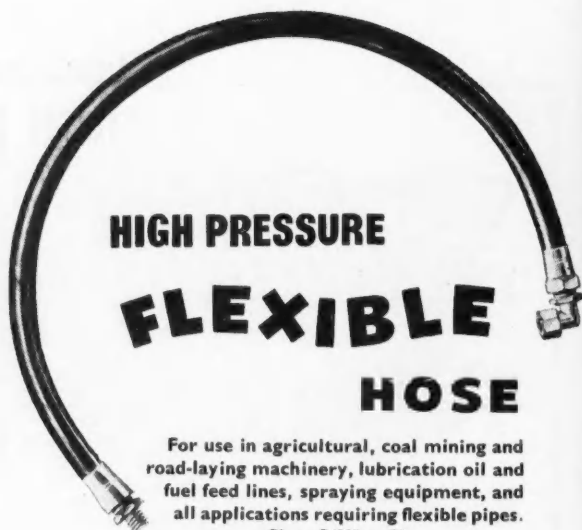


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(Continued from page 420)

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OP.192.—10RB EXCAVATOR, 9890 Series, Dragline Equipment, £725.
OP.203.—19RB EXCAVATOR, 10700 Series, Skimmer/Backactor Equipment, £1,400.
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E.1085.—37RB EXCAVATOR, 7300 Series, Dragline Equipment, very good condition, £3,000.
OP.201.—NCK304 EXCAVATOR, 1025 Series, fully rigged for crane work, 70ft. Jib, Power Boom lowering, 10-ton Hook Block, Full Set Weights, powered by Thornycroft NR6 Diesel Engine, very good condition, £2,400.

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OP.199.—19RB, Skimmer/Backactor Equipment, £275.
OP.199.—19RB, Dragline Equipment, Butt-type Jib, £325.
E.1106.—Michigan C16 EXCAVATOR, with Skimmer/Backactor, Face Shovel, Dragline and Crane Attachment, £1,350.

A.603.—Broomwade SVD1 110 c.f.m. Diesel COMPRESSOR, £345.
A.604.—Broomwade SVD3 350 c.f.m. Diesel COMPRESSOR, £550.
A.600.—C.P.T. 500 c.f.m. COMPRESSOR, Ruston Diesel Engine, £725.

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CP.567.—Dall Hand Scraper WINCHES, £165 each.
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C.781.—Coles 3-ton Diesel/Electric MOBILE CRANE, 10ft. Jib, overhauled, £700.

OP.198.—Neals QM MOBILE CRANE, 4/6-ton, with 50ft. Jib, £2,725.
OP.186.—Neals NM MOBILE CRANE, Ruston Diesel Engine, Jib up to 35ft. Straight Lattice, good condition, £1,075.

OP.178.—Neals G CRANE, powered by J.A.P. Petrol Engine, with 20ft. Lattice Jib, £200.
TS.3.—HT4 TRAXCAVATOR, very good condition, £2,175.

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TE.461.—Sheepfoot ROLLER, Double Drum, £275.
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C.839.—10-ton Anderson-Grice Steam DERRICK, 120ft. Jib, £2,800.

OP.148.—7/10cwt. Double Barrow Wickham HOISTS, 22ft. Masts, Mobile, £95 each.
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FOR HIRE, Lorry-mounted MOBILE CRANES—3-ton, 5-ton and 10-ton Coles, 2-ton Hydracranes and Jones. Jib lengths up to 60ft.

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FOR HIRE, Lorry-mounted MOBILE CRANES—3-ton, 5-ton and 10-ton Coles, 2-ton Hydracranes and Jones. Jib lengths up to 60ft.

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Gulson Road, Coventry. Telephone

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5/31/2 Millars CONCRETE MIXER, running order, £35.

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10/7 Stothert and Pitt MIXER, Pettors Diesel, year 1955, overhauled, £175.

10/7 Elaw Knox MIXER, £150.

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Owen M120 1/2 cu. yd. GRAB, £150.

Priestman 10/8 GRAB, £140.

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Half-price.

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All Contractors' Plant at very competitive rates.

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3-ton Smiths Diesel Mobile Double Drum Grabbing CRANE, solid rubbers.

37RB, with 60ft. Jib and 11yd. Bucket.

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KEBRIC for your next DUMPER—New.

Used or HIRE Distributors for the "over-strong"

Concrete DUMPER, 15cwt. and 1yd. Thwaites and Benford Used 15cwt. DUMPERS for SALE, ready for

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Michigan Lorry-mounted CRANE, in excellent

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Wayne American Truck-mounted CRANE, in first-class

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7 cu. yd. REAR DUMP, first-class condition, £1,800

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Dragline Equipment, new 1952. Series 15900, re-

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HD. 5G Tractor Shovel, 1955 £3,000

HD. 7 with Gar Wood hydraulic angle-
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Knox Digma 4 yd. Scraper, 1944 £700

Carco 'E' Winch for International TD.9 £175

Carco 'E' Winches for Fiat 55's £350

FIAT

55L with hydraulic angledozer, recon-
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55L with hydraulic angledozer, recon-
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Mackay Industrial Equipment Ltd.,
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Two Winger 7TH and 7THR 10/7 cu. ft. Diesel

CONCRETE MIXERS, each fitted Pettor Engine.

Thoroughly checked over. In good condition through-

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New 1947. Overhauled in our works. In first-class

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DINKUM DIGGER, on Fordson Major Tractor, Diesel,

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31/2-ton Vibro-Verken Trailer Type VIBRATING ROLLER.

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Zenith PILE EXTRACTORS, Nos. 20 and 30.

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LOW-LOADING TRAILERS, 1-ton and 7-ton carrying

capacity, very little used, £185 and £325, respectively.

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Model 650/H/30, mounted on International Chassis

6 x 4, with Cummins Engine, 35ft. Mast, powered by

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Will accept £4,000.—HOOKER, 48 Ormside Street,

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ROLLER, fitted with Scarifier, Water Tank,

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Rochill, Dodworth, near Barnsley.

REQUIRED, FACE SHOVEL EQUIPMENT

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DROTT SHOVEL, very good condition,

recent reconditioned rollers, on track, complete

4-in-1 equipment.—Particulars from Box P.1072, "The

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Butlers 10T Steam DERRICK CRANE, oil-fired, 120ft.

Jib, with bogies.

Westwood 68/78 cu. ft. Double Rope GRAB, with

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Albaret Model C11 50-ton pneumatic-tyred COMPAC-

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Ruston and Hunstet 20/40-h.p. Diesel LOCOMOTIVES,

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B.S.P. 70ft. Steel PILE FRAME.

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McKiernan-Terry Double-acting PILE HAMMERS, Sizes

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Engine. Also spare engine available.

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Pegson SAND WASHING PLANT, complete with

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Smith 3-ton and 5-ton Steam LOCO CRANES.

24in. gauge unused and very good second-hand 25lb.

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Ruston EXCAVATORS, all sizes, all equipments.

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Butlers DERRICK CRANES.

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5/31/2 Benford Diesel driven, on four steel wheels.

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5/31/2 Stothert and Pitt Petrol and Diesel driven, on

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5/31/2 Stothert and Pitt Diesel driven, on four

steel wheels.

5/31/2 Ransomes Rapier Petrol and Diesel driven, on four

steel wheels.

7/5 Stothert and Pitt Diesel driven.

10/7 Winger, Ransomes Rapier, Rex, Parker and Stothert

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drum, Petrol, Diesel or Electric driven. Some with

Built-in Weighers.

14/10 and 18/12 Rex and Millars' closed drum, Electric

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OFFERS THE FOLLOWING FIRST-CLASS CONTRACTORS' PLANT:
 Two Neals Type NM 2-ton Diesel CRANES, on pneumatic tyres, with or without Priestman Grabs, £1,500 each.
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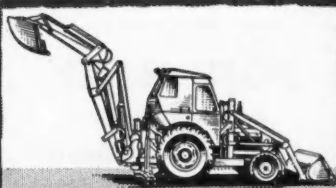
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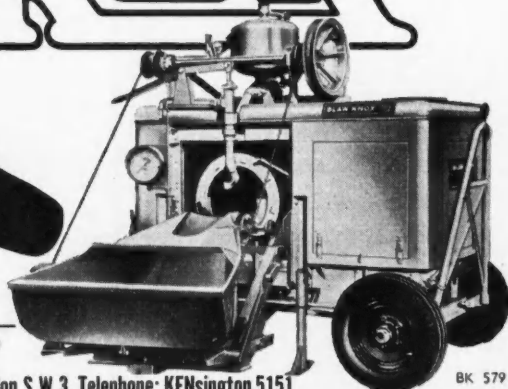
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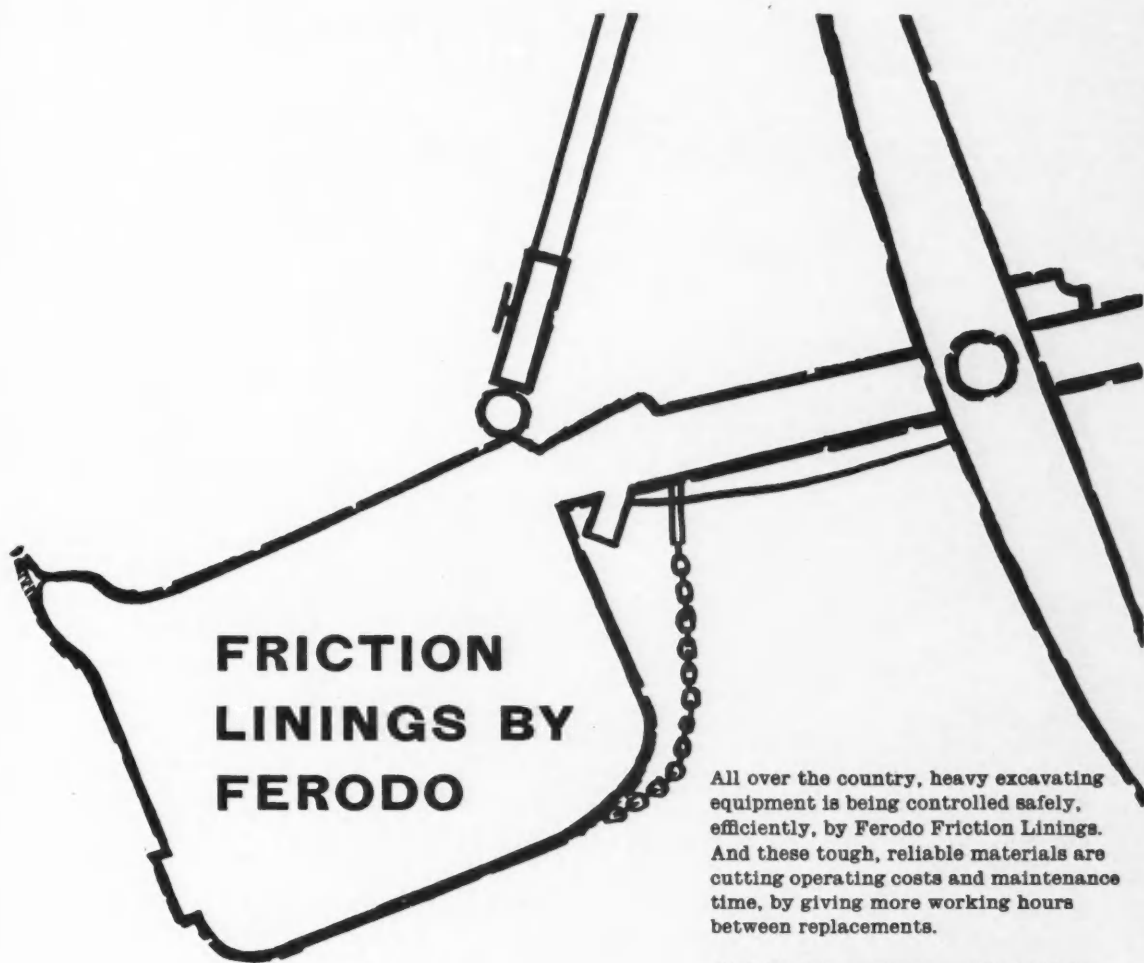
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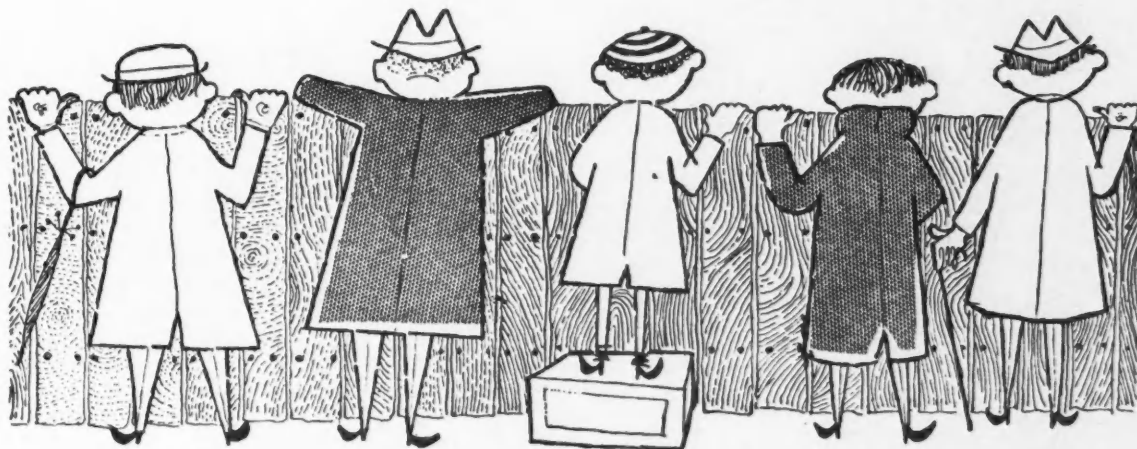


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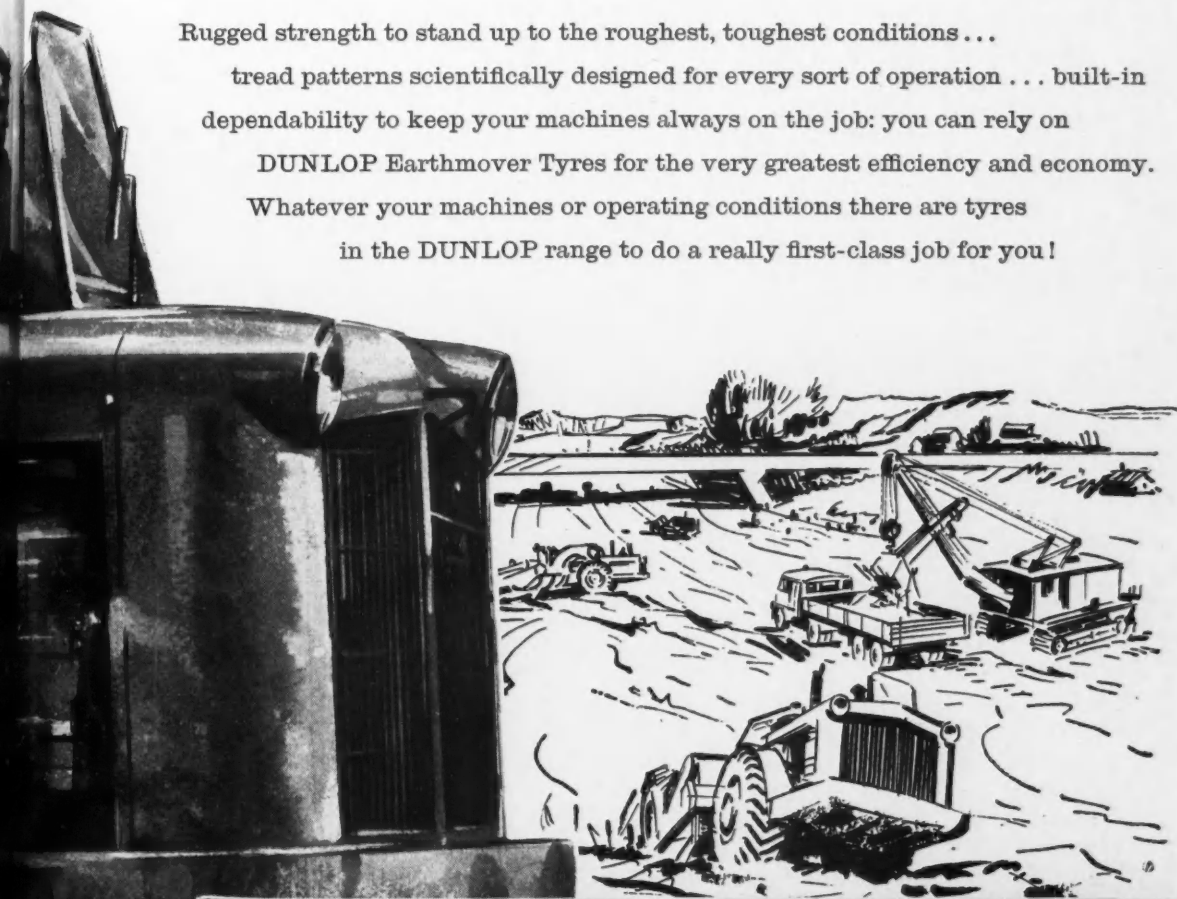
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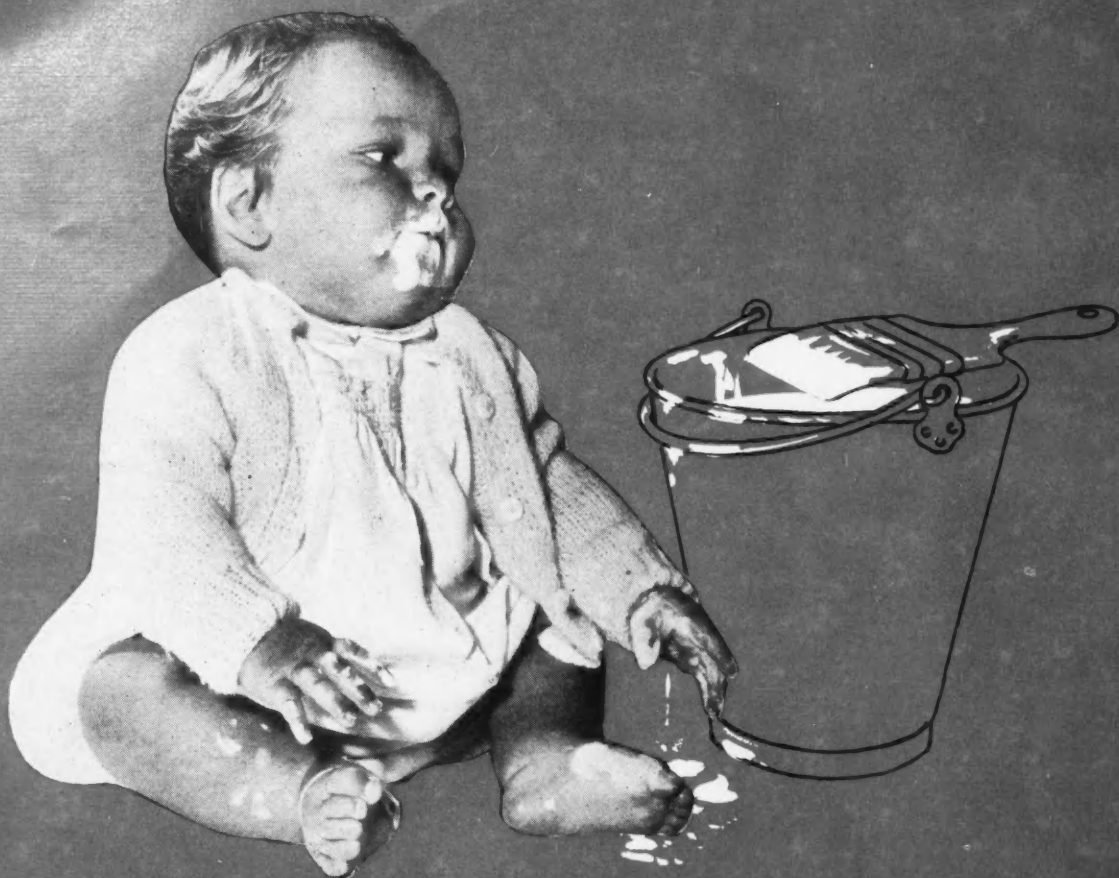


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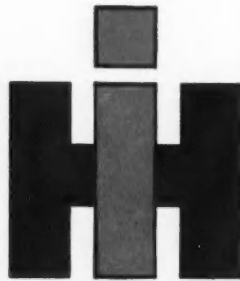
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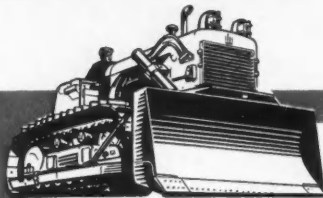
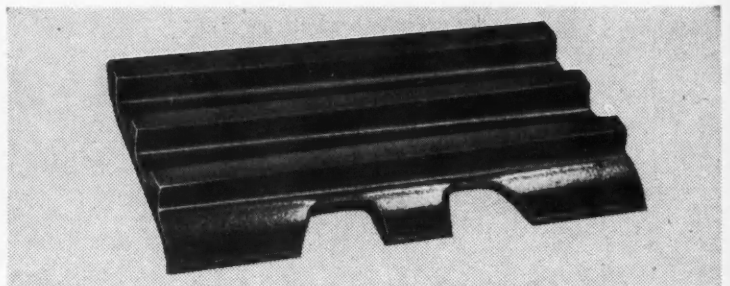
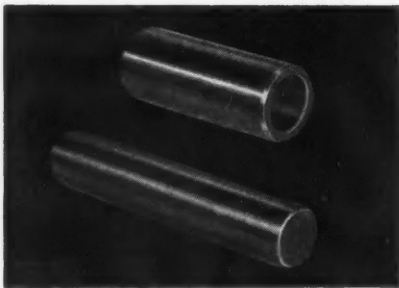
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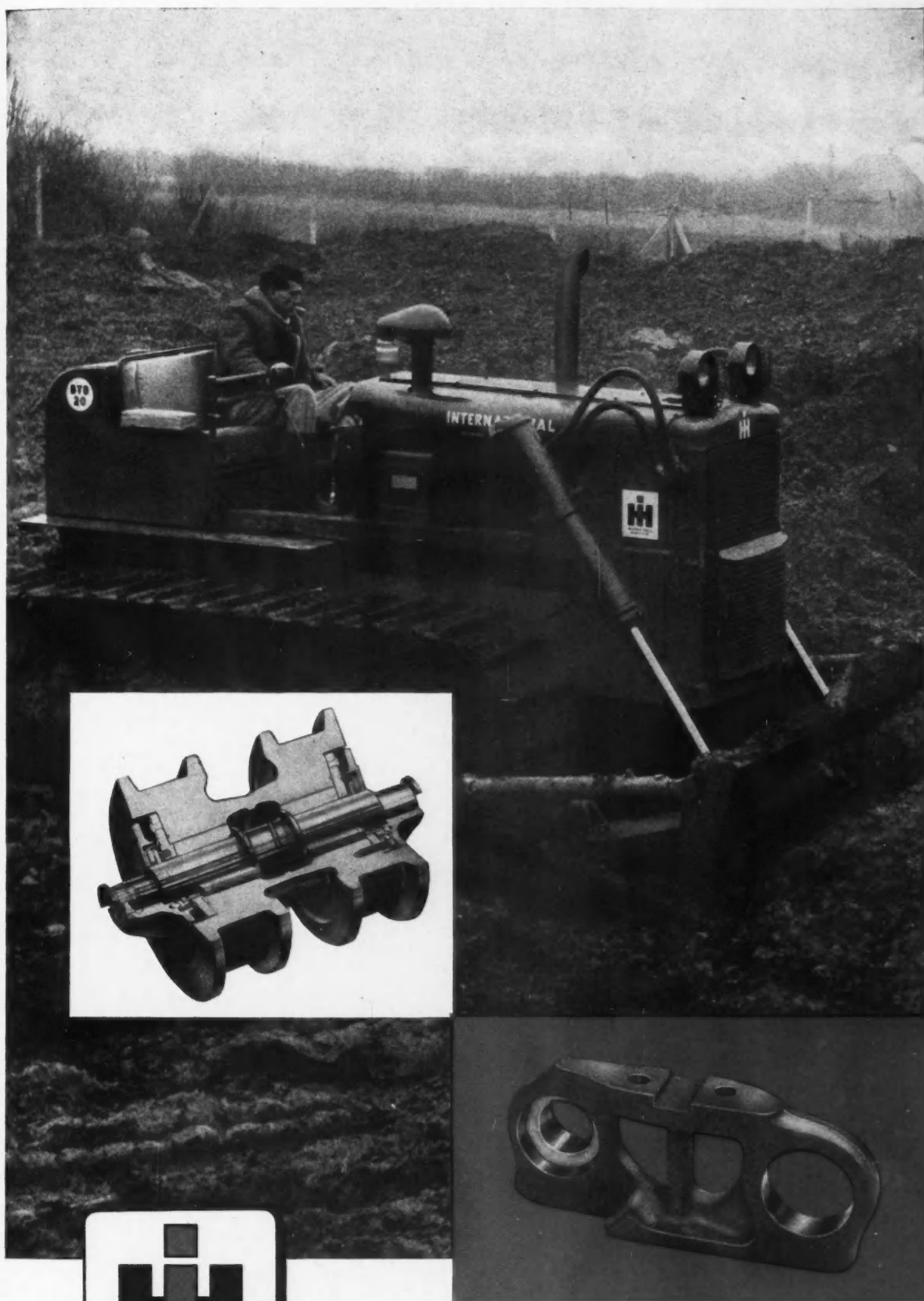
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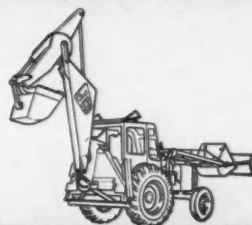
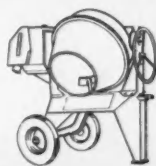
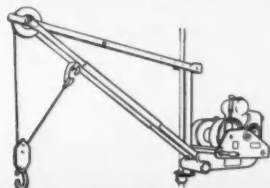
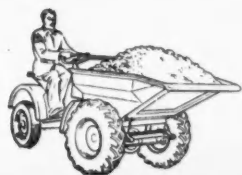
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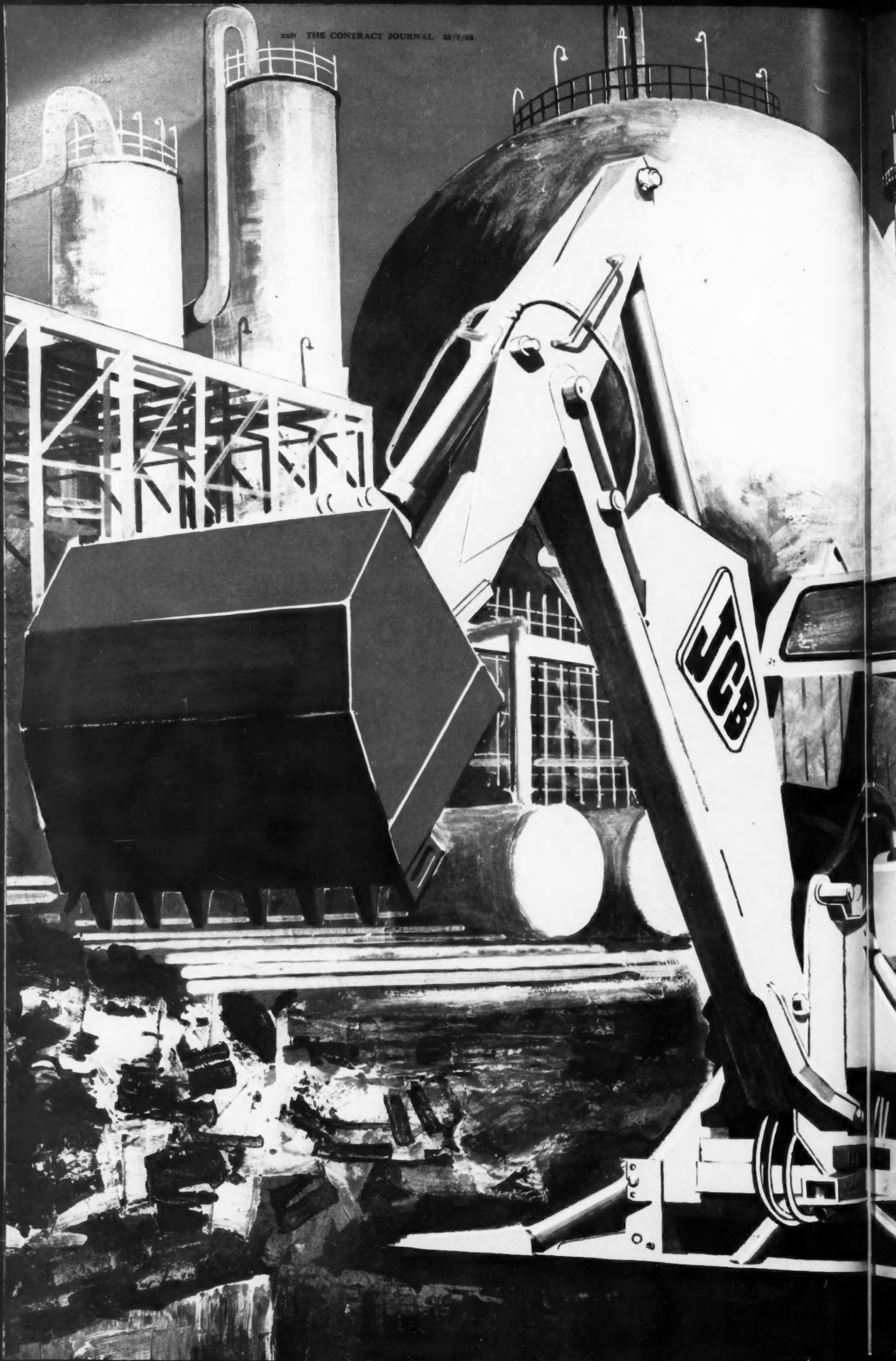
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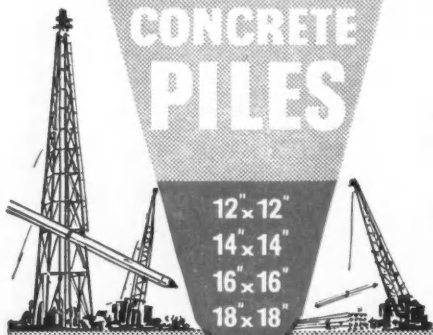
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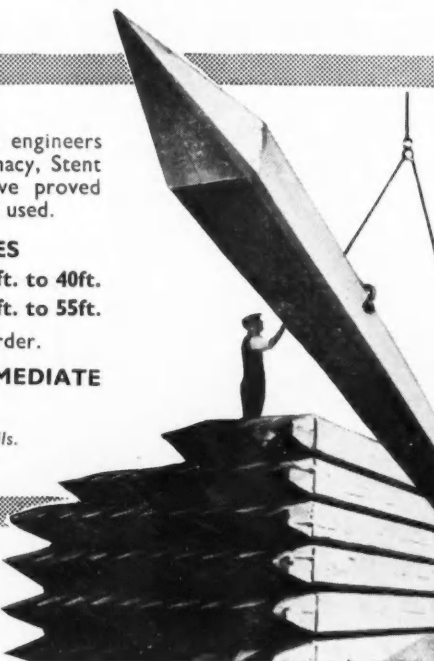
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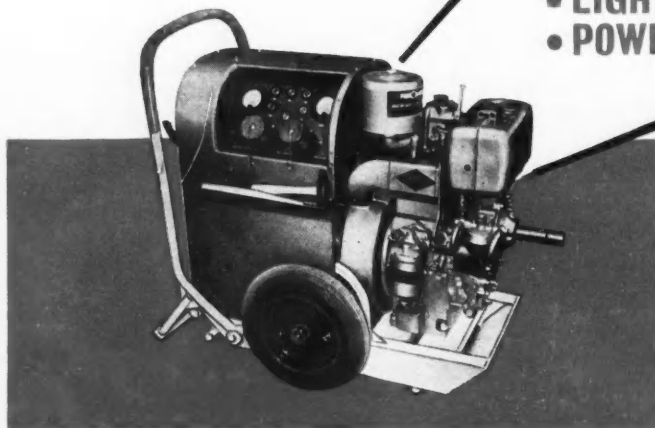
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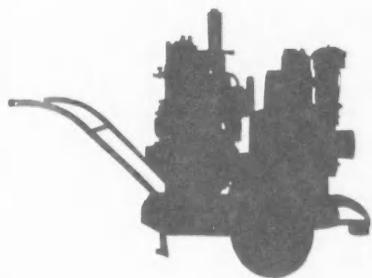
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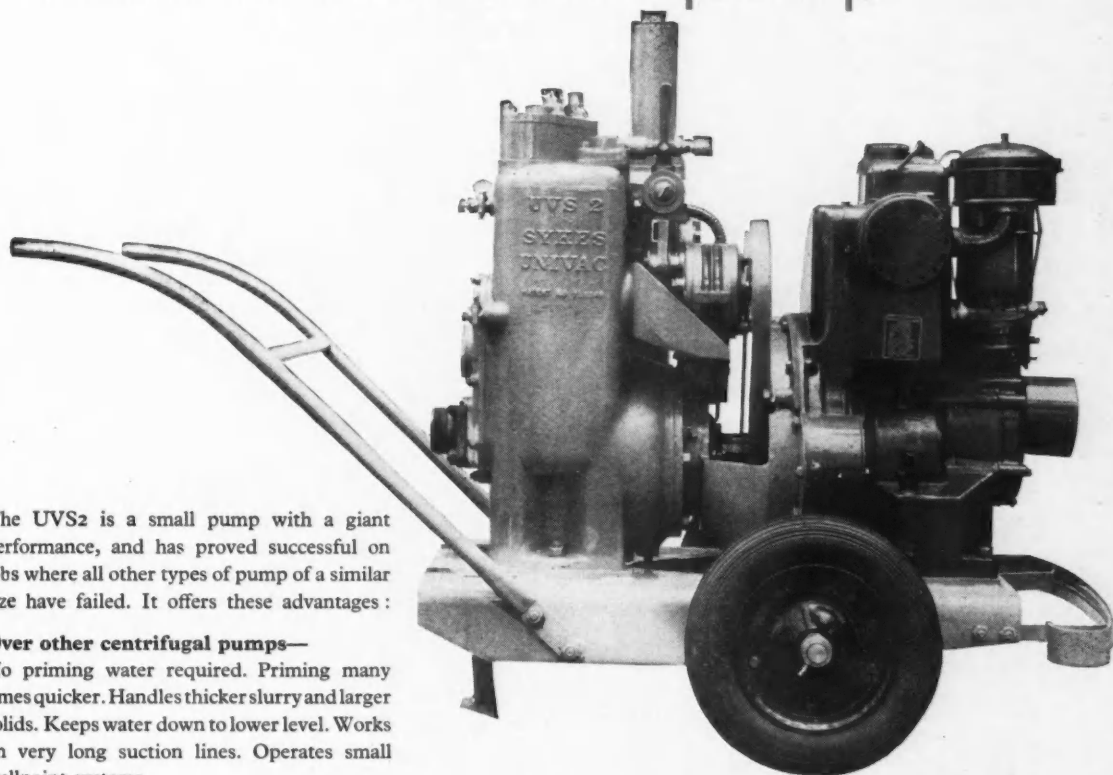
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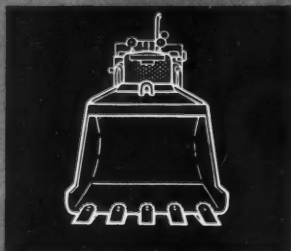
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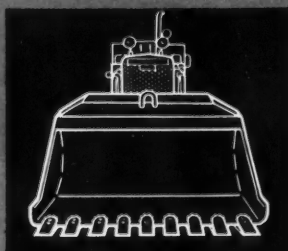
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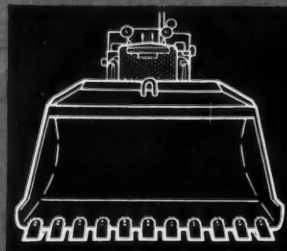
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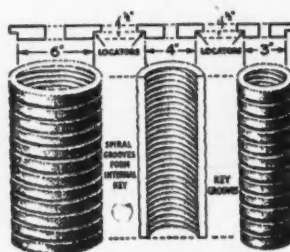
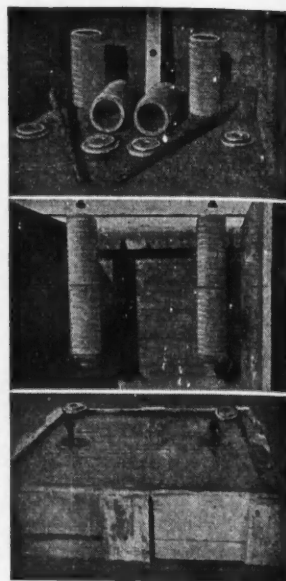
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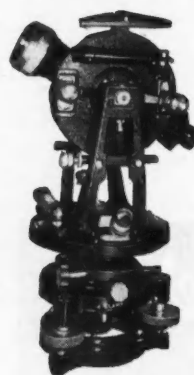
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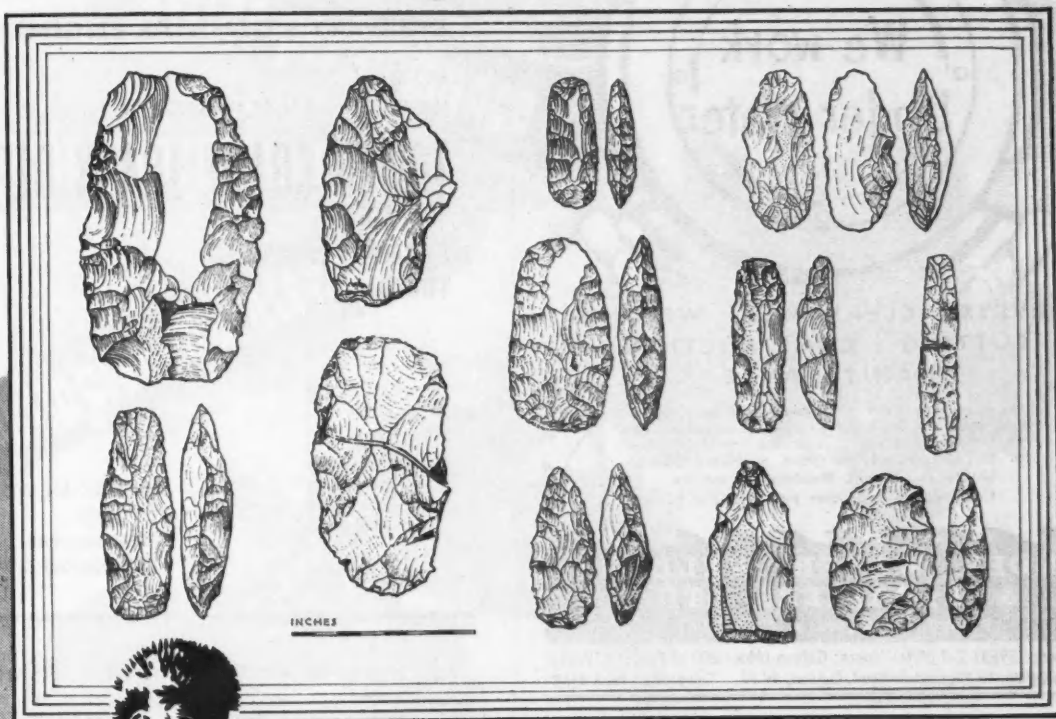
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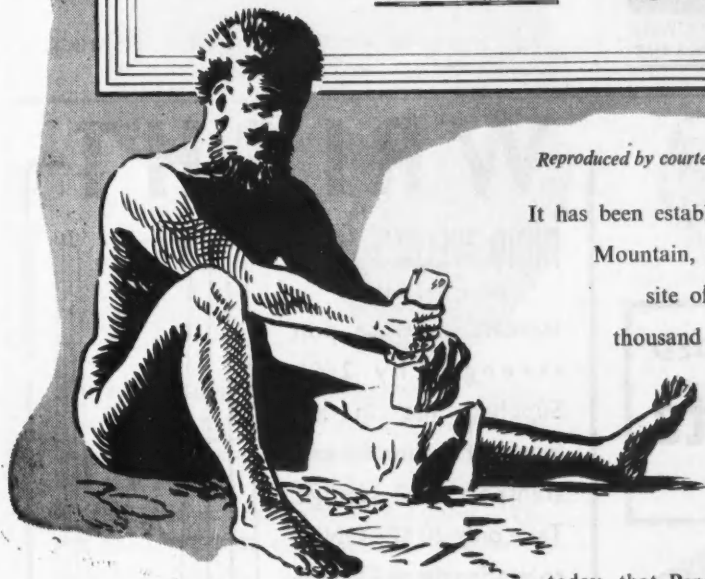
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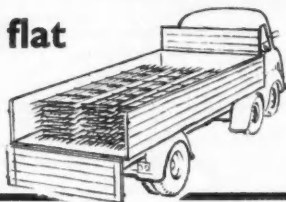
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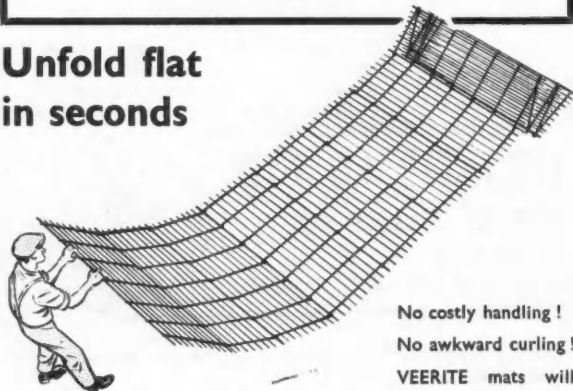
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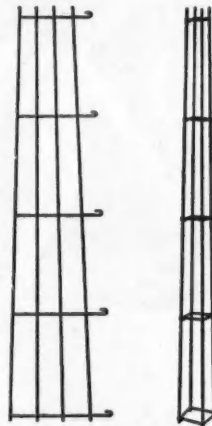
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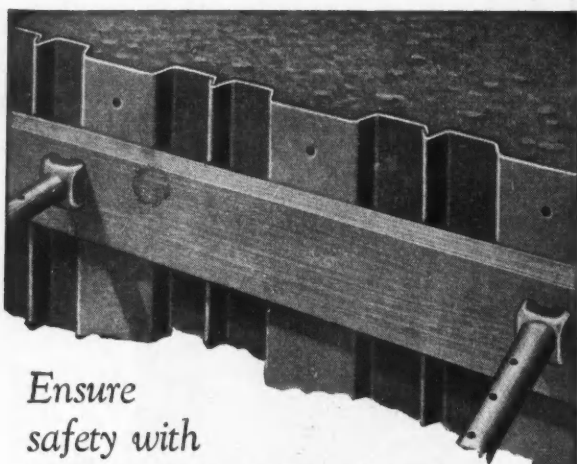
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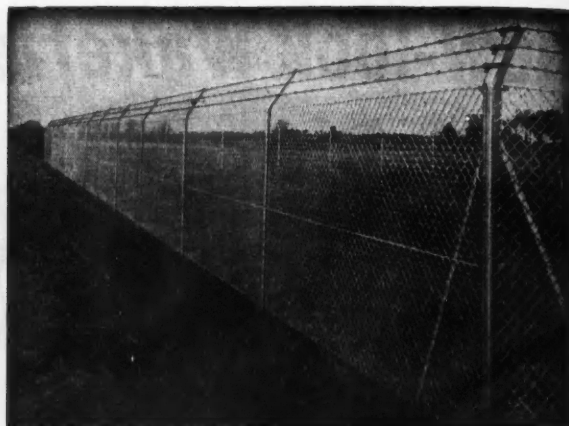


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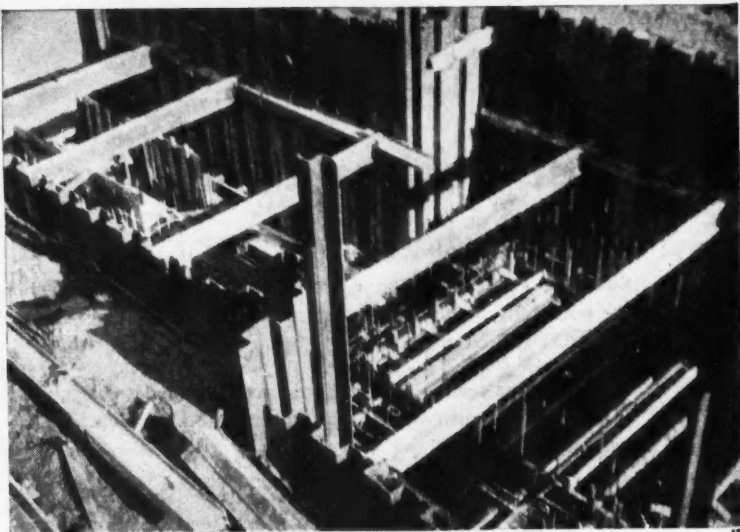
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DANGERFIELD, F. J. & CO., LTD., 261A Finchley Rd., London, N.W.3. (Tel.: HAMstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)
FERRIS AND AGGREGATES, LTD., Northampton Road Quiries, Rushden (2534/5). (See Northants.)
GRAVEL PRODUCTS (HUNTS), LTD., St. Neots, Hunts. (Tel.: St. Neots 123.) Pits at Little Paxton, near St. Neots. (Tel.: St. Neots 308.) Deliveries in Beds., Hunts. and South Cambs.
ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) (See Huntingdonshire for details.)
WEBB, C., CAMBRIDGE. 35 Magrath Avenue, Cambridge. (Tel.: 3669/4353.) (See Cambridgeshire.)
WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) Largest producers of all grades of washed aggregates in Bedfordshire and Northamptonshire. Regular deliveries anywhere.

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AMEY'S AGGREGATES, LTD., Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading (2538.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.
BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For detls. see Leics.)
BULL, BRG., S. AND L., LTD., 126A High Street, Winchester. (Tel.: 2264.) (See Hampshire.)
COFF, HARRY A., LTD., Buckhurst Hill, Chesham, Ascot, Berks. (Tel.: Ascot 1026/7.) Sand, all grades of washed aggregates, hardcore, clinker, ashes and hoggins.
CURTIS, J. AND SONS, LTD., Botley Works, Oxford. (Tel.: Oxford 41081/2/3.) Sand and all grades of washed aggregates. Pits at Radley, near Abingdon. (Tel.: Abingdon 441.)
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GRUNDON, S. (EWEELME), LTD., Eweelme, Oxon. (Tel.: Eweelme 20.) London Office (Tel.: Uxbridge 4156.) All grades washed aggregates. Path hoggins, broken stone, building sand.
HAINES, H. (WITNEY), LTD., Oxford Road, Witney. (Tel.: Witney 42.) All grades washed aggregates, hardcore, pitching and broken stone, Cotswold building and walling stone.
JANES AND CO., LTD., 2C Buckingham Avenue, Slough. Sand, aggregates, hardcore, ashes, bulldozing and bulk excavations. (Tel.: Slough 2061/2/3.)
LONDON BALLAST CO., LTD. (Tel.: Paddington 5064.) 55A Porchester Terrace North, Paddington, W.2.
POOL (LECHADE), LTD., Head Office: Burford Road, Lechlade, Glos. (Tel.: Lechlade 219.)
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SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel.: 961), Salop.

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ASPHALTE CARPETS, LTD., 38 Buckingham Palace Road, London, S.W.1. (Tel.: Tate Gallery 4857 or Gerrards Cross 3496.) Manufacturers of all grades of gravel bituminous macadam, gravel asphalt and cold asphalt at Gerrards Cross.
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BICESTER STONE CO., LTD., Stratton Audley 238. Manufacturers and suppliers of all grades limestone (tarmacadam, dry, pitching stone, hardcore, etc.)
COFF, HARRY A., LTD., Buckhurst Hill, Chesham, Ascot, Berks. (Tel.: 1026/7.) (See Berkshire.)
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DRINKWATER, W. W. (WILLESDEAN), LTD., Rush Green, Denham, Bucks. (Tel.: Denham 2241/2/3.)
GRUNDON, S. (EWEELME), LTD., Eweelme, Oxon. (Tel.: Eweelme 20.) London Office (Tel.: Uxbridge 4156.) All grades washed aggregates. Path hoggins, broken stone, building sand.
HAINES, H. (WITNEY), LTD., Oxford Road, Witney. (Tel.: Witney 42.) All grades washed aggregates, hardcore, pitching and broken stone, Cotswold building and walling stone.
HALL AND CO., LTD., Brentford, Middlesex. (Tel.: Islington 4455) and Coronation Road, High Wycombe (Tel.: 4360/1), and at Gerrards Cross. Pits at Wraybury (Middx.) and Iyer (Bucks.).
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WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) (See Bedfordshire.)

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DANGERFIELD, F. J. & CO., LTD., 261A Finchley Rd., London, N.W.3. (Tel.: HAMstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)

CAMBRIDGESHIRE

DARBY'S SAND AND GRAVEL CO., LTD., The Brook, Sutton, Ely. (Tel.: Sutton 391/3.) All grades of washed sand and gravel, ready-mixed concrete. Pits: Mepal and Chippenham, Cambs.
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NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)
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CASTLETON SAND AND GRAVEL QUARRIES, LTD., Pennant and Quarry, Whaley Bridge. (Tel.: Whaley Bridge 139.) Washed sand and gravel.
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HARPER AND TOMES, LTD., Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)
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DORSET LIMESTONE, LTD., Bumpers Lane, Eusem, Portland, Dorset. (Tel.: Portland 2207/8.) Tarred and bituminous macadam, foundation materials, limestone for all purposes and to all gradings. Portland stone aggregates and Portland cement aggregates for reconstructed masonry. By road and sea.
GILSON, S. C. AND SONS, LTD., Holcombe, near Bath. (Tel.: Bath 2451.)
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DURHAM

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ESSEX

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BENGAY AND SONS, LTD., Longmoor, Kingland, Leominster, Herefordshire. (Tel.: Kingland 301/4.) (See details under Herefordshire.)
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BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For data, see Leics.)
BULL, BROS., S. AND L., LTD., 126A High Street, Winchester. (Tel. 2264.) Concrete aggregates (reconstituted, pit-mixed, washed to meet any specification) also ballast, hogsline, path gravel and sand from own pits at Fawley, Lockerley, Rinswood, Romsey, Sway and Totton.
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GILSON, S. C. AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-Avon 243.)
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RALPH OF BARNSTOCK, LTD., 37 Kempshott Lane, Basingstoke, Hants. (Tel. 85.) Concrete aggregates, building sand, path gravel, hogsline, etc.
WRAYBURY SAND AND GRAVEL CO., LTD., Station Rd., Theale, Reading, Berks. (Tel.: Theale 373.)
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BENRGY AND SONS, LTD., Longmore, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) Suppliers of all grades of crushed concrete aggregates, road metal, pitching stone, hardcore and coated macadam.
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DANGERFIELD, F. J., & CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMPSHIRE 8044/8.) For all road aggregates, kerbs, setts. (See London.)
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WEBB, G., CAMBRIDGE, 35, Magrath Avenue, Cambridge. (Tel. 3969/4333.) (See Cambridgeshire.)
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DANGERFIELD, F. J., & CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMPSHIRE 8044/8.) For all road aggregates, kerbs, setts. (See London.)
FERRERS AND AGGREGATES, LTD., Northampton Road Quarrs, Rushden (2354/5). (See Northants.)
GRAVEL PRODUCTS (HUNTS), LTD., St. Neots, Hunts. (Tel.: St. Neots 123.) Pits at Little Paxton, near St. Neots. (Tel.: St. Neots 308.) Deliveries in Beds., Hunts. and South Cambs.
NENE BARKS AND LIGHTER CO., LTD., Market Chambers, Peterborough (Tel. 5534/5), and Ship End Quarries, Wansford, near Peterborough (Tel.: Wansford 384/9). Roadstones, hardcore, broken stone, ballast, ash, silica clay and sand.
ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives. (Tel.: St. Ives 2441/2/3/4.) Producers of all grades of washed sand and gravel. Ready mixed concrete. Precast concrete of every description.
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WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel. 4587/8/9.) (See Bedfordshire.)

KENT

BRISTED SAND PITS, Bristed, Kent (Tel. 586.) London Office: 5A Eldery Street, S.E.15. (Tel.: New Cross 3337.) Soft and plastering sands, line and sand-mix for brick, hardcore, S.E. bricks, shales, etc.
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CLUBB, J. LTD., Dartford, Kent. (Tel.: Dartford 25431.) Pits in North Kent, Medway area and Sevenoaks district. All washed and crushed gravel aggregates, concrete and building sand.
DIAMOND TREAD CO. (1938), LTD., Ditton Court Quarry, Larkfield, near Maidstone. (Tel.: West Malling 3444.) Quarryworks; tarmacadam, bituminous macadam and dry road stone manufacturers and suppliers. Head Office: 21-22 Old Bailey, London, E.C.4. (Tel.: City 7001-10 lines.)
DIAMOND TREAD CO. (CHART), LTD., Swan Lane Quarries, Little Chart, Ashford, Kent. Quarry-owners; tarmacadam, bituminous macadam and dry roadstone suppliers. All inquiries to Area Office: Ditton Court Quarry, Larkfield, near Maidstone, Kent. (Tel.: W. Malling 3444.)
HALL AND CO., LTD., Canning Street, Maidstone (Tel.: Maidstone 51031), and at Folkestone and Hayes. Pits at Lunford, near Larkfield. Gravel aggregates, concrete, plastering and building sand. Surecrete precision-mixed concrete.
HARRIS, M. F. AND CO., LTD., Station Road, Paddock Wood Kent (Tel. 184.) (See Essex.)
TILBURY CONTRACTING AND DREDGING CO., LTD., Postley, Maidstone. (Tel.: Maidstone 55401/2/3.) Suppliers of tarrad, bituminous and dry Kentish ragstone, sea walling, asphalt fillers, Scotch granite and kerbing.

LANCASHIRE

BROOMEYS, LTD., Sandaids, Milnthorpe (Tel. 3251/2). Westmorland. (See Westmorland.)
BUCKTON QUARRY, Broken stone, all grades. (Tel.: Mossley 123.) Or write Main Road, Oldham.
CASTLETON SAND AND GRAVEL QUARRIES, LTD., Trows Lane, Castleton, nr. Rochdale. (Tel.: Castleton 57100.) Lee Quarries, Bacup (Tel.: Bacup 287.) Washed pit sand, crushed washed stone aggregates; pitching stone.
CROFT GRANITE BRICK AND CONCRETE CO., LTD., West Bank, Widnes. (Tel.: 2656.) "Kubitzed" concrete aggregates to B.S.S., tarrad and bituminous macadam, cold asphalt, "Croftmatte" Wet Mix filter media, concrete products.
CRODEN GRAVEL, LTD., Cheside, Stoke-on-Trent, Staffs. (Tel.: 393.) Manchester Office: Blackfriars 3765/7. Plant capacity, 2,000 tons per day.
DUNNING AND SON, LTD. (See Shropshire.)
HATLEY JOHN W., LTD., Lundsfield Quarry, Carnforth, Lancs. (Tel.: Carnforth 100.) Large producers of highest quality washed sands, clean washed natural pebble and crushed gravel aggregates for all constructional purposes.
HILTON GRAVEL, LTD., Rice Street, Liverpool Road, Manchester, 3. (Tel.: Deansgate 5455 and 5456.) Quarries at Cheside, Staffs. (Tel.: Team 241.) And at Lonsdale, Stoke-on-Trent. (Tel.: Blackfriars 2777/8.)
HULLAND GRAVEL CO., LTD., Cheside, Stoke-on-Trent. (Tel.: Cheside 2323/4, 2119 and 2195.) Manchester Office: Hardy Buildings, 3 Cateaton Street, Manchester, 3. (Tel.: Blackfriars 2777/8.)
PENMAENMAWR AND WELSH GRANITE CO., LTD., all sizes and gradings of crushed granite aggregate. Immediate delivery ex stock.
Liverpool and Preston Depots:
 Office: 7 Picton Road, Liverpool, 15. (Tel.: Sefton Park 7261.)
 Manchester Depot:
 Office: Cornbrook Road, Manchester, 15. (Tel.: Trafford Park 3830.)
ROUND-O-QUARRIES, LTD., Helsby Street, Warrington. (Tel.: 35451-4 lines.) Building and concrete sand and shale.
TERN HILL SAND AND GRAVEL CO., LTD., Almonington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffordshire for details.)
TRENTHAM GRAVEL CO., LTD., Lordley Quarries, Willoughbridge, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel, twice washed sharp concrete sand and plastering sand. Plant capacity: 2,000 tons per day.
WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) Local Office and pits, Chorley 3923.
WITHERS LIMESTONE, LTD., Black Lane Quarry, Clapham, via Lancaster. (Tel.: Clapham 318/9.) Quarries at Carnforth 3277. Graded limestone aggregate to B.S.S., all sizes. Immediate delivery ex-stock.
X.I. GRANITE (INGLETON), LTD., Head Office: Clapham, via Lancaster. (Tel.: Clapham 318/9.) Works Tel.: Ingleton 231. All sizes and gradings of Ingleton granite aggregate.

LEICESTERSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For data, see Leics.)
BRUNTINGTHORPE GRAVELS, LTD., Gilmorton, near Rugby. (Tel.: Lutterworth 46.) All sizes gravel aggregate, building and concrete sand to B.S.S., scientifically balanced ballast.
CLIFFE HILL GRANITE CO., LTD., Markfield, near Leicester. (Tel.: Markfield 561/2/3.) Granite aggregates to B.S.S., all sizes. Tarrad and bituminous granite concrete, shales and kerbs. Transil-mixed concrete.
CROFT GRANITE, BRICK AND CONCRETE CO., LTD., 128-136 High Street, Edgware, Middlesex. (Tel.: Edgware 07676 and 1246.) "Kubitzed" granite aggregate to B.S.S., tarrad and bituminous macadam, cold asphalt, "Croftmatte" Wet Mix filter media, concrete products.
DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brizworth 278 and 298; Duston 505.) (See Northamptonshire.)
ENDERBY AND STONEY STANTON GRANITE CO., LTD., 21 New Walk, Leicester. (Tel.: 56682.) Square, N.W.1. (Tel.: Amb. 1141.)
HILTON GRAVEL, LTD., Hemmington Fields, near Shardlow, Derby. (Tel.: Shardlow 266.)
HOVERINGHAM GRAVEL CO., LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171-13 lines.) (For details, see Nottinghamshire.)
MOUNTSOREL GRANITE CO., LTD., 21 New Walk, Leicester. (Tel.: 56682.) Quarries at Mountsorrel, near Loughborough. (Tel.: Loughborough 164.) Gravel aggregates, concrete, plastering and building sand.

LEICESTERSHIRE

WANLIP GRAVELS, LTD., Wanlip Road, Syston, Leicester. Any size or grading, scientifically balanced ballast. All to B.S.S. (Tel.: Syston 2327 and 2797.)
WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) (See Northamptonshire.)
WREAKE VALLEY GRAVELS, LTD., Asfordby, Melton Mowbray. (Tel.: Pits-Rotherby 25.) Head office—Asfordby 282. All grades washed aggregates and sand.

LINCOLNSHIRE

BULLIMORES SAND AND GRAVEL, LTD., South Witham, Grantham. (Tel.: Thistleton 223.) Building sand, hardcore, shales. All grades washed sand and aggregates.
BURROWS BROTHERS (EXCAVATIONS), LTD., Market Place Chambers, West Bara, Chesterfield. (Tel. 7130.) (For details, see Derbyshire.)
CONINGSBY SUPPLY CO., LTD., Registered Office: The Broadway, Woodhall Spa, Lincs. (Tel.: Woodhall Spa 3150.) Screened limestone, hardcore, pitching, filling, flint, hogsline, ex-quarries or delivered.
DOW-MAC (PRODUCTS), LTD., Tallington, Stamford. All grades of washed sand and gravel. (Tel.: Market Deeping 2301.)
EAST MIDLANDS BUILDERS SUPPLY CO., 21 Castle-dyke West, Barton-on-Humber, Lincs. (Tel. 2189.) All grades washed sand and gravel, roadstones, hardcore, washed silica sand.
GIBBONS, F. B. AND SONS, LTD., Registered Office: Welby House, Market Deeping, near Peterborough. (Tel.: Market Deeping 321/2/3/4.) Pits at Langton, near Peterborough. (Tel.: Market Deeping 2210.) All grades washed sand and aggregates.
HARTSHOLME GRAVEL AND SAND CO., LTD., Hartsholme Wood, Doddington Road, Lincoln. Sole selling agents: Hartsholme Sales, Ltd., 17 West Parade, Lincoln. (Tel.: Lincoln 8741.)
HOVERINGHAM GRAVEL CO., LTD., Hoveringham, Nottingham. (Tel.: Lowdham 3171-13 lines.) (For details, see Nottinghamshire.)
PETERBOROUGH QUARRIES, LTD., Sandylands, Masey, Peterborough. (Tel.: Market Deeping 2355-3 lines.) Quarry at Bosley, all grades of hardcore and broken stone. (See also Northamptonshire.)
POLLARD, C. AND SON (TALLINGTON), LTD., Walk House, Langtoft, Peterborough. Pits at Tallington, near Stamford. (Tel.: Market Deeping 2140.) All grades washed sand and aggregates. For Supercrete ready mixed concrete, phone Market Deeping 3132.
TRENTFORD GRAVELS, LTD., Head Office: Deansgate, Grimby. (Tel.: Grimby 5354.) Washed and graded gravel and sand, roadstone, hardcore, slag, tarmac, ashes, etc. Pits and quarries throughout the county.

LONDON

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For data, see Leics.)
COX, H. AND SONS, LTD., 33 Southampton Way, Camberwell, S.E.5. (Tel.: Rodney 2215-3 lines.)
CROFT GRANITE, BRICK AND CONCRETE CO., LTD., 128-136 High Street, Edgware, Middlesex. (Tel.: Edgware 07676 and 1246.) "Kubitzed" granite aggregate to B.S.S., tarrad and bituminous macadam, cold asphalt, "Croftmatte" Wet Mix filter media, concrete products.
DANGERFIELD, F. J., & CO., LTD., 261A Finchley Road, N.W.3. (Tel.: HAMPSHIRE 8044/8.) Granite, limestone or slag, coated or dry, all sizes and pitching, granite kerb and setts, felspar quartz and other minerals by road or rail, or ex-London stock.
DORSET LIMESTONES, LTD., Bumpers Lane, Easton, Portland, Dorset. (Tel.: Portland 2207/8.) (For details, see Dorset.)
DRINKWATER, W. W. (WILLESDEN), LTD., Dudden Hill Lane, Willemsden, N.W.10. (Tel.: GLADSTONE 6400/5.) Pits: Rush Green, Denham, Bucks. (Tel.: Denham 2241/2/3.) Also Staines Road, Hounslow Heath, Middlesex. (Tel.: Hounslow 622/3.)
HALL AND CO., LTD., Chantry House, Ecclesdon Street, S.W.1. (Tel.: Sloane 7122), and at East Dulwich, Poplar and Wandsworth. Gravel aggregates, concrete, plastering and building sand.
KEEN, W. J. AND SONS, 18 Granville Road, Epping, Essex. (Tel.: Epping 2520.) All sands, ballast, shingle and hardcore supplied.
LONDON BALLAST CO., LTD., Head Office: Paddington 5064, 55A Porchester Terrace North, Paddington, W.2.
READ, P. T., LTD., Downs Works, Amhurst Terrace, Hackney, E.8. (Tel.: Clissold 6971/2.) All sands, ballast and shingles supplied and delivered; also ready mixed concrete. Pits: Farnham Airfield, Forest Road, Ilford, Essex. (Tel.: Hainault 6111/2/3.)
ROADS RECONSTRUCTION (1934), LTD., Stockley Lane, West Drayton, Middlesex. (Tel.: West Drayton 3041.) All sizes broken limestone, dry and coated to British Standards.

MERIONETHSHIRE

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel. 961), Salop.

MIDDLESEX

CROSS, GEO. C. AND CO., LTD., Ironbridge, Uxbridge Road, Southall. (Tel.: Southall 2264/5/6.) Sand, ballast, shingle, hardcore, ashes, etc.
DRINKWATER, W. W. (WILLESDEN), LTD., Staines Rd., Hounslow, Hm., Middx. (Tel.: Hounslow 622/3.)
GRUNDON, S., 79 Harrington Road, Hillingdon, Middlesex. (Tel.: Uxbridge 4156.) Sand, ballast, shingle, hardcore, ashes, excavation and demolition.
HALL AND CO., LTD., Chantry House, Ecclesdon Street, S.W.1. (Tel.: Sloane 7122), and at Ashford and Brentford. Pit at Bedford, near Feltham. Gravel aggregates, concrete, plastering and building sand.
LONDON BALLAST CO., LTD., (Tel.: Paddington 5064.) 55A Porchester Terrace North, Paddington, W.2.
STUART MACEY, LTD., Gordon Road, High Wycombe. (Tel.: High Wycombe 2591/2.)
THAMES SAND AND GRAVEL CO., LTD., Fordbridge Rd., Shepperton, Walton-on-Thames 2316.) Gravel aggregates, concrete, plastering and building sand.
WRAYBURY SAND AND GRAVEL CO., LTD., Pits at Wraybury. (Tel.: Wraybury 164.) Gravel aggregates, concrete, plastering and building sand.

CONTRACTORS' GUIDE TO AGGREGATES

MID-WALES

BENGRY AND SONS, LTD., Llangmor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)

ELLSMERE SAND AND GRAVEL CO., LTD., Wood Lane, Ellesmere, Salop. (Tel.: Ellesmere 167.) (For details, see Shropshire.)

HARPER AND THOMAS, LTD., Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)

NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)

OLD RADNOR TRADING CO., LTD., Quarries in Radnorshire. (Tel.: Kingston 11.) (See Herefordshire.)

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel. 961), Salop.

TERN HILL SAND AND GRAVEL CO., LTD., Alington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffordshire for details.)

MONMOUTHSHIRE

IN-SITU CONCRETE, LTD., Victoria Works, Ebbw Vale (Tel. 3032) and Phoenix Works, Cardiff (Rhwbina 2360) for limestone and slag aggregates, ready-mixed concrete, tarmacadam, media, filling, etc., kerbs and pavings.

MONMOUTHSHIRE ASSOCIATED QUARRIES, LTD., Head Office: 38 Chestnut Road, Newport, Mon. (Tel.: Newport 5831/2.) Suppliers of all grades of concrete aggregates, road metal, pitching stone, tarmacadam and bituminous macadam in limestone, dolomite and blue pennant stone. Quarries throughout the county.

WHITECLIFF QUARRIES AND BRICKWORKS, LTD., Colford, Glos. (Tel. 3158/9.) (See Gloucestershire.)

MONTGOMERYSHIRE

HARPER AND THOMAS, LTD., Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)

NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel. 961), Salop.

NORFOLK

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For details, see Leics.)

FRECKENHAM GRAVEL CO., LTD., The Brook, Sutton, Ely, Cambs. (Tel.: Sutton 391/3.) Washed sand and gravel. Pits: Felton.

JOHNSON, P. C. H., LTD., Station Road, Terrington St. Clement, near King's Lynn. (Tel.: Terrington St. Clement 248.) Suppliers of all grades of washed and graded aggregates to B.S.S.

THORPE GRAVEL PITS, LTD., Harvey Lane, Norwich. (Tel.: Norwich 3524/4.) Washed and graded aggregate stone and gravel delivered to all parts of Norfolk and Suffolk.

NORTHAMPTONSHIRE

AMEY'S AGGREGATES, LTD., Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421-10 lines.) Pits at Dry Sandford, near Abingdon; Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton. (Tel.: Cogenhoe 464.) For washed and graded aggregates to B.S.S.

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For details, see Leics.)

BICESTER STONE CO., LTD., Stratton Audley, Bicester, Oxon. (Tel.: Stratton Audley 238.) Manufacturers and suppliers of all grades of limestone tarmacadam, dry, pitching stone, hardcore, etc.

BILLING GRAVEL CO., LTD., Station Road, Billing, Northampton. (Tel.: Cogenhoe 219; London office: 23 Berkeley Square, W.1.) (Tel.: Mayfair 6341.)

BRAYBROOK, E. W., LTD., Newton Road, Higham Ferrers, Northants. (Tel.: Rushden 3344 and 3345.) All grades of washed and graded aggregates to B.S.S., Building sand, hardcore.

DANGERFIELD, F. J. AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMstead 804/8.) For all road aggregates, kerbs, setts. (See London.)

DOW-MAC (PRODUCTS), LTD., Tallington, Stamford. All grades of washed sand and gravel. (Tel.: Market Deeping 230.)

DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 305.) Producers of building and walling stone, roadstone, hardcore, broken stone, ashes, sand, gravel and hoggins. Immediate delivery throughout Northamptonshire.

FERRERS AND AGGREGATES, LTD., Northampton Road Quarries, Rushden, Northants. (Tel.: Rushden 2354/5.) Largest producers in the county of all grades of high-quality concrete aggregate to B.S.S. Deliveries throughout Northamptonshire and adjoining counties.

GIBBONS, F. B. AND SONS, LTD., Welby House, Market Deeping, Peterborough. (Tel.: Market Deeping 332/2383.) (See Lincolnshire for details.)

HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Loughborough 3171-15 lines.) (For details, see Nottinghamshire.)

KETTON STONE CO. (Prop. Andrew's Garage), Ketton, near Stamford. (Tel.: Ketton 206.) Hardcore, roadstone, crushed stone, top soil, silica clay. Quarries at Ketton.

NENE BARGE AND LIGHTER CO., LTD., Market Chambers, Peterborough. (Tel. 5534/5.) and Ship End Quarries, Wansford, near Peterborough. (Tel.: Wansford 384/5.) Roadstone, hardcore, broken stone, ballast, ashes, silica clay and sand.

NEWARK (PETERBOROUGH) SAND AND GRAVEL CO., LTD., 127 Eastfield Road, Peterborough. (Tel.: Peterborough 2091.) All grades washed and screened sand and gravel.

PETERBOROUGH QUARRIES, LTD., Sandylands, Mazy, Peterborough. (Tel.: Market Deeping 2355-3 lines.) Eight quarries supplying all grades of hardcore and broken stone. Also Wensley at Yarwell, Wansford. All grades gravel and sand at Mazy.

POLLARD, C. AND SON (TALLINGTON), LTD., Walk House, Langtoft, Peterborough. (Tel.: Market Deeping 2140.) (See Lincolnshire for details.)

WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) Largest producers of all grades of washed and graded aggregates to B.S.S. and Bedfordshire. Regular deliveries anywhere. Local office and pits: Portly Ford. (Tel.: Welford 250.)

NORTH WALES

CAWOOD, WHARTON AND CO., LTD., Pistyll Gwyn Quarry, Llanarmon, near Mold. (Tel.: Llanarmon-y-lai 27.) Crushed limestone and tarred macadam, all grades.

NORTH WALES

CHESHIRE AND NORTH WALES TARRED MACADAM CO., LTD., Llanarmon, near Mold. (Tel.: Llanarmon-y-lai 43.) Hard, broken limestone, dry and coated to B.S.S. Inquiries to Registered Office: Market Chambers, Tower Square, Tunstall, Stoke-on-Trent. (Tel.: Stoke-on-Trent 8804.)

ELLSMERE SAND AND GRAVEL CO., LTD., Wood Lane, Ellesmere, Salop. (Tel.: Ellesmere 167.) (For details, see Shropshire.)

ENSTON BROS., LTD., Inaf Quarry, Clynnog Fawr, Caernarvon. (Tel.: Clynnog Fawr 297/8.) All sizes crushed, washed natural sand and gravel. Highest quality. Precast concrete products, ex our Griffiths Crossing Factory, Caernarvon. (Tel.: Caernarvon 2355/6.) Crushed granite ex our quarry, Pengwern and Gwydyr Quarries, Ltd., Trefriw, Llanrwst, Denbighshire. (Tel.: Llanrwst 38.)

PENMAENMAWR AND WELSH GRANITE CO., LTD., Quarries: Penmaenmawr. (Tel.: 2256/8), and at Trevor. (Tel.: Clynnog Fawr 223.) Caernarvonshire. All sizes and gradings of crushed granite aggregate. Any quantity per day; immediate delivery ex stock. Coated granite, top dressing, etc.

RUTHIN AND DENBIGH TARMACADAM CO., LTD., Denbigh. (Tel.: Denbigh 75.) Lime, limestone, carbonate of lime, tarmacadam, etc. Also inquiries to Lunt Bros., Ltd., 23 Colmore Row, Birmingham. (Tel.: Central 7408-4 lines), and Lunt Bros., Ltd., Stourbridge. (Tel. 5201-6 lines.)

TERN HILL SAND AND GRAVEL CO., LTD., Alington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffordshire for details.)

NOTTINGHAMSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For details, see Leics.)

BURROWS BROTHERS EXCAVATIONS, LTD., Market Place Chambers, West Bar, Chesterfield. (Tel. 7130.) (For details, see Derbyshire.)

LEEN QUARRIES, LTD., Central Chambers, Wellgate, Rotherham. (Tel.: Rotherham 5223.) Crushed and graded stone, concrete and building sand, plastering sand and crushed gravel; could be collected ex-quarry or delivered.

GUNTHORPE GRAVELS (1958), LTD., (Tel.: Nottingham 77357; and Works: Loughborough 2131.) (An associate company: T. C. Campbell, Ltd.) All grades washed gravel and sand to B.S.S.

HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Loughborough 3171-15 lines.) Quarries at Hoveringham, Holme, Pierpoint, Colwick, Bleasby and Newark. All grades of washed gravel and sand to any specification. Crushed quartzite for surface dressing. Trade a speciality. Plant capacity 8,000 tons per day.

NEWARK GRAVEL AND CONCRETE CO., LTD., Grove Street, New Balderton, Newark, Notts. (Tel.: Newark 401.) All grades washed sand and aggregates.

SALISBURY AND WOOD, LTD., Matlock. (Tel. 272/273.) (For details, see Derbyshire.)

OXFORDSHIRE

AMEY'S AGGREGATES, LTD., Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421-10 lines.) Pits at Dry Sandford, near Abingdon; Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton. (Tel.: Cogenhoe 464.) For washed and graded aggregates to B.S.S.

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: Norwood Hill 115.) (For details, see Leics.)

BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)

BICESTER STONE CO., LTD., Stratton Audley, Bicester, Oxon. (Tel.: Stratton Audley 238.) Manufacturers and suppliers of all grades of limestone tarmacadam, dry, pitching stone, hardcore, etc.

CURTIS, J. AND SONS, LTD., Botley Works, Oxford. (Tel.: Oxford 41081/2/3.) Sand and all grades of washed aggregates. Pits at Radley, near Abingdon. (Tel.: Abingdon 441.)

DANGERFIELD, F. J. AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMstead 804/8.) For all road aggregates, kerbs, setts. (See London.)

DIX, G. H. AND SON, LTD., Freeland, Oxon. (Tel.: Freeland 234.)

DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 305.) (See Northamptonshire.)

GRUNDON, S. (EWE) LTD., Ewelme, Oxon. (Tel.: Ewelme 201; London Office: 236.) (See London.)

HAINES, H. (WITNEY), LTD., Oxford Road, Witney. (Tel.: Witney 42.) All grades washed aggregates, hardcore, pitching and broken stone, Cotswold building and walling stone.

WRAYBURY SAND AND GRAVEL CO., LTD., Station Rd., Theale, Reading, Berks. (Tel.: Theale 373.)

RADNORSHIRE

BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)

NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)

OLD RADNOR TRADING CO., LTD., Quarries in Radnorshire. (Tel.: Kingston 11.) (See Herefordshire.)

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel. 961), Salop.

RUTLAND

BULLIMORES SAND AND GRAVEL, LTD., South Witham, Grantham, Lincs. (Tel.: Thistleton 223.) Building sand, hardcore, ashes. All grades washed sand and aggregate.

GIBBONS, F. B. AND SONS, LTD., Welby House, Market Deeping, Peterborough. (Tel.: Market Deeping 3321/2383.) (See Lincolnshire for details.)

HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Loughborough 3171-15 lines.) (For details, see Nottinghamshire.)

KETTON STONE CO. (Prop. Andrew's Garage), Ketton, nr. Stamford. (Tel.: Ketton 206.) Hardcore, roadstone, crushed stone, top soil, silica clay. Quarries at Ketton.

PETERBOROUGH QUARRIES, LTD., Sandylands, Mazy, Peterborough. (Tel.: Market Deeping 2355-3 lines.) Quarry at Greatham, all grades of broken stone and hardcore. (See also Northamptonshire.)

RUTLAND

POLLARD, C. AND SON (TALLINGTON), LTD., Walk House, Langtoft, Peterborough. (Tel.: Market Deeping 2140.) (See Lincolnshire for details.)

SCOTLAND

KEIR AND CAWDER, LTD., Kirkintilloch Road, Bishopbriggs. (Tel.: Elshophrigs 3200.) All grades washed sand and gravel aggregates.

SHROPSHIRE

BALLIDON QUARRIES, LTD., Ballidon, near Ashbourne, Derbyshire. (Tel.: Farwich 201 and 202.) Clean and graded dry limestone to B.S.S., all sizes, coated limestone to B.S. 802 and 1621 and wet-mix; large output; reliable deliveries.

BENGRY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)

DUNNING AND SON, LTD., Haughmond Quarry, near Shrewsbury. (Tel.: Upton Magna 286/7.) All grades of high-quality roadstone, concrete aggregates and coated macadam. All to B.S.S. Any tonnage available for immediate delivery.

ELLSMERE SAND AND GRAVEL CO., LTD., Wood Lane, Ellesmere, Salop. (Tel.: Ellesmere 167.) All grades of washed gravel, aggregates, concrete and building sand.

HARPER AND THOMAS, LTD., Bayston Hill Quarry, Shrewsbury. (Tel.: Bayston Hill 351.) High quality roadstone, chippings, concrete aggregates, hardcore and coated macadam. Large tonnages always available.

NASH ROCKS STONE AND LIME CO., LTD., Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)

OLD RADNOR TRADING CO., LTD., Kingston (Tel. 11.) (See Herefordshire.)

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington (Tel. 961), Salop.

TERN HILL SAND AND GRAVEL CO., LTD., Alington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffordshire for details.)

WENTHAM GRAVEL CO., LTD., Lordsey Quarries, Willoughbridge, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Twice washed sharp concrete sand. Plastering sand. Plant capacity 2,000 tons per day.

SOMERSET

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